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ABSTRACT

This report is concerned with the relationship of professors and undergraduates at Stanford University. Its purpose is to create the substance for a debate about the quality of teaching and learning at the undergraduate level. The major themes of the report are: (1) Stanford's rise to national excellence as a major research university over the past three decades has had both positive and negative consequences for undergraduate education. (2) Only about one in every three Stanford undergraduates is satisfied with the present quality of faculty-student relations and the advising system. (3) Four important outcomes of the educational process are positively and strongly linked to the amount of interaction students have with professors. The incidence of these outcomes for Stanford undergraduates as a whole is very low. Four basic objectives are suggested to improve the quality of student-faculty interaction: an enrichment in the level and quality of student-faculty interaction; a restructuring of the University's faculty evaluation and reward system; a redirection of the Office of the Dean of Undergraduate Studies so as to increase its effectiveness as an advocate for undergraduate education; and a greater awareness by undergraduates of the benefits of interaction with faculty members, and the necessity to participate in the initiation of it. (Author)

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THE OTHER STANFORD

A Report on the Relationship of Professors and Undergraduate Students at Stanford University

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THE OTHER STANFORD

A Report on the Relationship of Professors and Undergraduate Students at Stanford University

by

The Student Task Force on Education at Stanford

Co-Editors

Brent Appel
Vance Peterson
Jay Schoenau

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First-rate research faculty are primarily interested in using people, including themselves, to advance the state of knowledge, while first-rate educators are principally interested in using knowledge to further the intellectual development of people. This basic philosophical difference can have significant practical implications in a faculty member's day-to-day dealings with students.

Steven B. Sample

+ + + + +

Whatever his original views and hopes, the student ordinarily suffered a certain disillusionment regarding the professor's interest priorities.... Perhaps it was disconcerting for students to consider whether learning could be important if teaching were not. Their reaction, however, was practical and paralleled that of their professors: just as it was possible to be a successful professor without being a teacher, so was it possible to be a successful student without being a learner [.] It could be argued that, inadvertently, the professor had taught the student a major fact of life in our society: that it is more important to succeed than it is to know.

Ray Whitfield

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MAJOR THEMES

This report is concerned with the relationship of professors and undergraduates in a major research-based university of national prominence. Its purpose is to create the substance for a debate both here and elsewhere about the quality of teaching and learning at the undergraduate level. We have chosen the title "The Other Stanford" as a means of drawing attention to the presently inadequate level and quality of interaction between professors and students. The major themes of the report are the following:

—Stanford's rise to national excellence as a major research university over the past three decades has had both positive and negative consequences for undergraduate education. On the one hand, the change has brought better classroom instruction, more academically able students, and greatly improved facilities; on the other hand, it has resulted in a condition which is best characterized by an ethos of impersonality and low levels of interaction between faculty and students.

—Only about one in every three Stanford undergraduates is satisfied with the present quality of faculty-student relations and the advising system. A study of specific faculty-student personal, academic, and social interaction patterns revealed that the amount of interaction overall is very low, but that students who report higher levels of interaction are apt to be more satisfied than those who do not.

—Four important outcomes of the educational process (being challenged to think by professors on a one-to-one basis; receiving extensive feedback from professors on work performed; having professors make a significant impact on one's intellectual development; and being stimulated to think about ideas going beyond the subject matter of a course or assignment) are positively and strongly linked to the amount of interaction students have with professors. The incidence of these outcomes for Stanford undergraduates as a whole, however, is very low.

—In the view of the Task Force, there are four reasons which explain the existence of the "other Stanford." First, students have not done enough themselves to promote greater contact with the faculty. This failure seems to be directly related to student passivity and to a set of cues from the faculty which have discouraged students from seeking more interaction. Second, faculty have not performed well as teachers, primarily because they have been caught in a web of pressures resulting from a system of rewards and sanctions heavily skewed to favor competence in research over teaching; third, that the major study of undergraduate education conducted at Stanford in 1968 *(The Study of Education at Stanford)* was faulty in its design in that it failed to adequately probe the core of undergraduate teaching and learning; and fourth, that several important past proposals for strengthening undergraduate education at Stanford have not yet been implemented even five years after their origination.

—The "other Stanford" can be overcome if the University assigns a higher priority to improving the quality of student-faculty interaction in the future, and if it adopts the following four basic objectives:

I. an enrichment in the level and quality of student-faculty interaction;

II. a restructuring of the University's faculty evaluation and reward system;

III. a redirection of the efforts of the Office of the Dean of Undergraduate Studies so as to increase its effectiveness as an advocate for undergraduate education; and,

IV. a greater awareness by undergraduates of the benefits of interaction with faculty members, and of the necessity to participate in the initiation of it.

Chapter I

THE TWO STANFORDS

Stanford University changed dramatically in the years following World War II. Formerly a regional, predominantly undergraduate institution, Stanford attained national prominence in scholarship and research. This transition had substantial impact on the faculty and the student body as well as the institutional structure of the University. As a result, the experience of being an undergraduate at Stanford was altered substantially. One aspect of this change, characterized by better instruction, brighter students, and improved facilities, is familiar to nearly everyone reasonably well versed in higher education. There is, however, another Stanford, one characterized by impersonality, remoteness, and distance between students and faculty. Undergraduates face both of these Stanfords daily.

The Stanford Everyone Knows

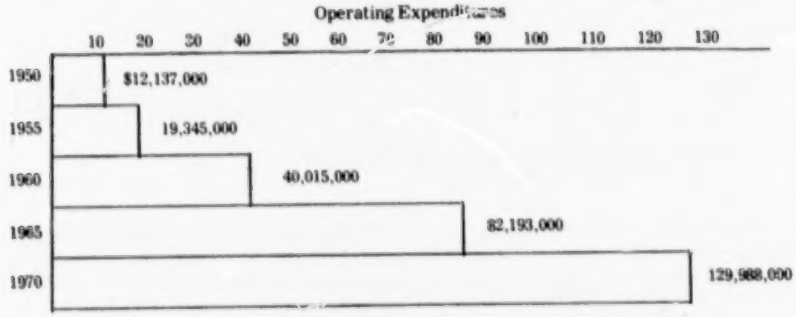
University publications and the media have extensively reported the benefits of recent changes at Stanford for undergraduate education. The faculty, for instance, increased in quality as well as size between 1950 and 1970. The members of the Academic Council* rose from 358 to 1031, an increase in two decades of nearly 300 percent.[1] A study sponsored by the American Council of Education illustrated the substantially improved quality of the faculty, reporting that eleven Stanford departments had faculties considered "distinguished" by their professional peers and that twelve were rated "strong."[2] By 1970, Stanford boasted six nobel laureates on the faculty: three in physics, two in medicine, and one in chemistry.

The quality and composition of the student body also substantially changed. Though undergraduate enrollment increased by 25 percent between 1950 and 1970, graduate enrollment rose by 83 percent.[3] Stanford's undergraduate admissions policies became "among the most selective in the country," with only 25 percent of the applicants accepted from a well qualified applicant pool.[4] The University attracted many of the most promising high school graduates. In the year 1968-69, the number of National Merit Scholars was among the highest of all American universities. Stanford graduates successfully competed with the best students in the nation, winning over 1000 national awards for advanced study in the period 1962-69.[5]

In financial terms, too, the University experienced rapid growth. By 1970, the consolidated budget at Stanford was $129,988,000, a ten-fold increase from 1950. (Table I-1)

TABLE I-1

Operating Expenditures



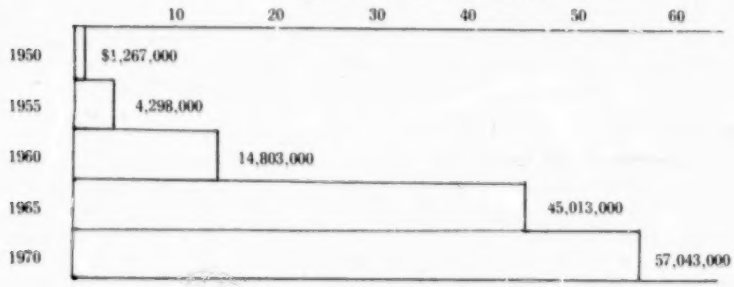
Source: *Stanford University Financial Report*, 1970, p. 22. Amounts exclude SLAC and Stanford University Hospital.

**The Academic Council consists of all faculty with the rank of Assistant Professor and above.*

Some of the money to finance this rise in expenditures came from increases in student tuition, gifts, and endowment income, but the greatest single factor in this growth was the remarkable increase in income from government contracts and grants. Rising from slightly over $1 million in 1950, income from this source rose to over $57 million in 1970, an increase five times faster than the growth of the budget as a whole. (Table I-2)

TABLE I-2

Growth in Government Contracts and Grants

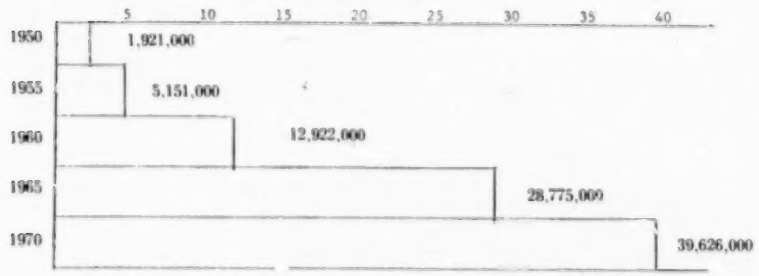


Source: *Stanford University Financial Report*, 1970, p. 22. Amounts Include SLAC and Stanford University Hospital

Most of these government contracts and grants involved the University in research, and between 1950 and 1970, the University research budget rose from about $2 million to nearly $40 million.[6] (Table I-3)

TABLE I-3

Research Growth, 1950-1970



Source: *Stanford University Financial Report*, 1970, p. 22. Amounts exclude SLACand Sanford University Hospital

The influx of these new research funds had substantial impact on the University. While he was President, Wallace Sterling praised the new research activity. According to Sterling, research funds brought to professors:

> ...opportunities to pursue an important intellectual interest, status that is associated with research grants, brilliant graduate students who are attracted to the professor both by his distinction and by the research grant at his disposal,

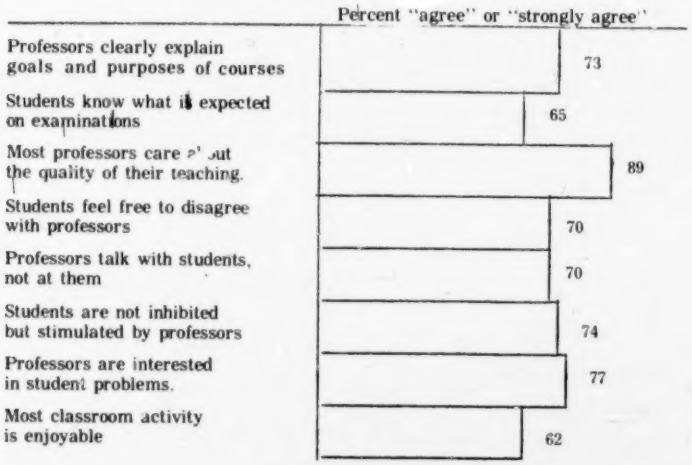
consulting opportunities, which, according to one observation, may add variety to his life and dollars to his income. The able researcher wins a national reputation and with it the rewards which come from promotions and more attractive positions.[7]

Undergraduate education received some benefits from these developments. Through a system of indirect cost recovery, some research funds found their way into the University's general fund that helped support the cost of undergraduate education. The faculty undergraduates faced in the classroom was improved. Prominent faculty designed new and innovative programs such as Values, Technology, and Society, Human Biology, and International Relations which offered undergraduates new approaches to world problems. In the late 1950's, an overseas program was created with five campuses that allowed fully half of Stanford's undergraduates to live and study in Europe for six months without falling behind in their academic schedule. A multi-million dollar undergraduate library was constructed to support undergraduate education.

Because of these beneficial developments, it is not surprising that undergraduate students today point to positive aspects of their educational experience. According to a 1973 survey conducted by the Task Force,* Stanford students responded favorably to several indices of effective classroom teaching. Table I-4 lists the percentages of students who "agreed" or "strongly agreed" with eight statements about undergraduate teaching at Stanford. It is clear from the table that the majority of students believe that professors care about the quality of their teaching and that they create a classroom climate which is conducive to learning and the free exchange of ideas. Furthermore, fully two-thirds of the students responding reported that, on the whole, their classroom activity was enjoyable.

TABLE I-4

Positive Aspects of Stanford Education

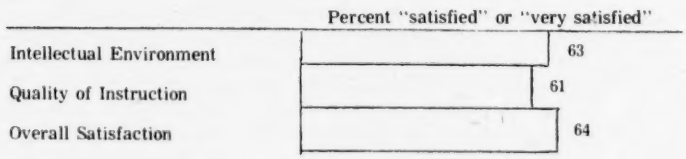

Percent "agree" or "strongly agree"
Professors clearly explain goals and purposes of courses
73
Students know what is expected on examinations
65
Most professors care about the quality of their teaching.
89
Students feel free to disagree with professors
70
Professors talk with students, not at them
70
Students are not inhibited but stimulated by professors
74
Professors are interested in student problems.
77
Most classroom activity is enjoyable
62

Appendix I contains a sample questionnaire and description of sample methodology.

The majority of students also expressed satisfaction with the quality of instruction and the intellectual climate at Stanford, although there was a significant minority who did not. When asked about "overall satisfaction" with Stanford, about two-thirds of the responding students reported that they were either "satisfied" or "very satisfied." (Table I-5).*

TABLE I-5

Indices of Student Satisfaction



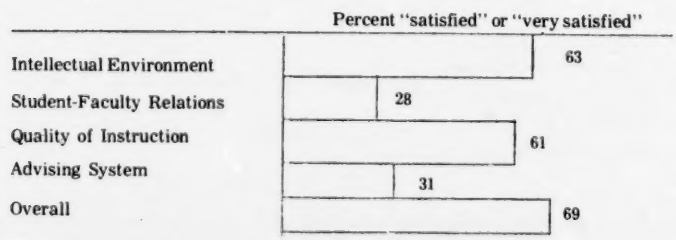
The Other Stanford

Plainly, students react positively to some elements in their Stanford experience. In spite of this, however, responses to the Task Force Survey suggest the existence of another Stanford, a Stanford which undergraduates face daily. The central features of the "other Stanford" are low student satisfaction with the quality of student-faculty relations and with the advising system. A major component of this dissatisfaction is a cluster of unfavorable student perceptions of the faculty as interactors. Underlying these perceptions are low academic, social, and personal interaction patterns between students and faculty. As a result, the "other Stanford" is characterized by remoteness, distance, and impersonal relations between a majority of students and faculty.

In the 1973 survey, the Task Force asked undergraduates whether they were satisfied with the quality of student-faculty relations and the advising system. Table I-6 shows the results, compared with the level of satisfaction with the intellectual environment, quality of instruction, and Stanford overall.

TABLE I-6

Additional Indices of Student Satisfaction



*Other possible responses were "on the fence", "dissatisfied", and "very dissatisfied".

The data clearly reveal that very few students at Stanford are satisfied with student-faculty relations and the advising system. We believe that this low level of satisfaction in these areas indicates that Stanford is not a community of scholars in which undergraduates are integrated closely into the activities of the University. Moreover, the expressed student dissatisfaction with student-faculty relations and the advising system is significant because it contrasts so sharply with the higher levels of satisfaction registered in the other three categories. As the Carnegie Commission on Higher Education stated after conducting a nation-wide study of student satisfaction which produced similar results:

> If most students were dissatisfied, then specific points of dissatisfaction would be overwhelmed by this generally negative attitude. But, when most students are generally satisfied, as they seem to be, then their particular concerns merit particular attention ... The general level of satisfaction makes the specific dissatisfactions both more credible and solutions more possible and more likely to be effective.[8]

These figures also are disturbing because in all categories, students are less satisfied after their freshman year. For instance, though nearly 70 percent of responding freshmen expressed satisfaction with the quality of instruction, only about half the seniors expressed such satisfaction. Figures on senior satisfaction with student-faculty relations and the advising system were even lower. Only about one in four seniors expressed satisfaction with these aspects of Stanford. Table I-7 presents the class breakdown of satisfaction with the aspects of undergraduate education introduced in Table I-6.

TABLE I-7

Student Satisfaction by Class

Indices	Class	Percent "satisfied" or "very satisfied"
Intellectual Environment	Freshmen	72
	Sophomores	57
	Juniors	61
	Seniors	60
Student-Faculty Relations	Freshmen	34
	Sophomores	27
	Juniors	25
	Seniors	27
Quality of Instruction	Freshmen	69
	Sophomores	58
	Juniors	64
	Seniors	51
Advising System	Freshmen	43
	Sophomores	31
	Juniors	21
	Seniors	23
Overall	Freshmen	79
	Sophomores	66
	Juniors	66
	Seniors	67

A major component of student dissatisfaction with student-faculty relations is a negative cluster of student perceptions of the faculty as interactors. Though professors are willing to speak with students, undergraduates feel that faculty seldom interact with them as individuals. (Table I-8) This finding is indirectly corroborated by a study done by John Black in the Office of the Dean of Student Affairs. In his study, Black found that one-half of the Stanford graduating seniors in the class of 1971 felt they knew of no more than one professor who knew them well enough to write a helpful letter of recommendation for them upon graduation.[9]

TABLE I-8

Student Perceptions of Faculty

Perception	Percent "agree" or "strongly agree"
Students see faculty outside of class	35
Faculty try to know me as a person	23
My present level of communi-- cation with faculty is about right	33
I feel like I know at least one member of the faculty as a person	48

Students also do not have a very favorable perception of the faculty as advisors. For instance, one in five of the respondents reported that they did not meet at all with their advisor during the fall quarter of 1972, even though most students plan their schedules in the fall for the remainder of the school year. Moreover, the data show that upper division students are far less likely to see their advisors than lower division students. Our data also indicate that students generally seem to feel that advising is perfunctory rather than substantive, and that they get better advice from their peers than from their faculty advisor (Table I-9). Summarizing this dissatisfaction, only about 40 percent of the students responding to our survey stated that they felt the counseling services offered by faculty members were patient, personal, and extensive.

TABLE I-9

Student Perceptions of Professors as Advisors

Perception	Percent "agree" or "strongly agree"
Advisors are interested in working out program with students	35
I get better advice from advisor than from peers	24
Counseling services by faculty are patient, personal, and extensive	39

To identify the existence of the "other Stanford," indicated by low satisfaction with student-faculty relations, does not explain the reasons for its occurence. Without further investigation into the "other Stanford," it would be impossible to intelligently formulate policy recommendations to remedy the situation. After

careful study, the Task Force has concluded that a crucial reason for the existence of the "other Stanford" is the present low level of student-faculty interaction. Indicative of this low interaction are the patterns of academic, social, and personal contact between faculty and students.

The low level of academic interaction in three important categories is presented in Table I-10. While most students have had some seminars, few have engaged in independent study or worked with faculty members on their research. In addition, over 70 percent responded that many of their professors relied on TA's to grade papers, thus limiting the potential for student-faculty interaction.

TABLE I-10

Academic Interaction Patterns

Interaction		Percent reporting
Number of Seminars in Stanford experience	None	18
	* Some	62
	* Many	20
Ever engaged in independent study with faculty member	Yes	24
	No	76
Ever worked with faculty member on his / her research	Yes	12
	No	88

* "Some" indicates 1-3, "Many" indicates more than three

Social interaction between students and faculty is also low. As seen in Table I-11, the majority of students responding to the survey stated that during fall quarter (1972) they never had lunch or supper with a faculty member, seldom were at a social function where a faculty member was present, and never participated in a bull session in which a faculty member took part.

TABLE I-11

Social Interaction Patterns
(Fall quarter, 1972)

Interaction		Percent reporting
Times had lunch or supper with faculty member	Never	51
	* Sometimes	42
	* Often	7
Times at social function with faculty members present	Never	45
	Sometimes	48
	Often	7
Times in bull session with faculty member participating	Never	57
	Sometimes	36
	Often	7

* "Sometimes" indicates one to four, "often" more than four

As with academic and social interaction, personal interaction between students and faculty is at a very low level (Table I-12). Our data show that only one in five students reported *ever* having sought personal advice from a faculty member, and less than half had *ever* felt close to a faculty member. Forty percent of the respondents stated that they had never talked with a professor about their career

plans, and more than half never had talked with a professor about life in general. Furthermore, approximately three-fourths of the respondents said that only one or two professors seemed to be interested in them as people during their Stanford experience. *

TABLE I-12
Personal Interaction Patterns

		Percent reporting
Ever sought advice from a faculty member on a personal matter	Yes	21
	No	79
Ever felt personally close to a faculty member	Yes	39
	No	61
Talked with a professor about career plans (fall quarter)	Never	40
	* Sometimes	53
	* Often	7
Talked with a professor about life in general (fall quarter)	Never	53
	Sometimes	39
	Often	7
Professors who seemed interested in student as a person (in Stanford experience)	None	24
	** Some	51
	** Many	25

* "Sometimes" indicates one to four, "often" more than four.
** "Some "indicates one to two, "many" more than two.

We believe that these low interaction patterns are reason for concern in themselves, but the Task Force also found significant correlations between interaction behavior and expressed satisfaction with student-faculty relations. Gamma

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** To better understand the prevalence of these low interaction patterns, the Task Force isolated and contrasted the data for freshmen and seniors to see whether, after four years of experience at Stanford, seniors reported higher levels of academic, social, and personal interaction with faculty than freshmen. The results showed that seniors did have overall higher levels of interaction, but that the absolute levels of their interaction were still low. For instance, the data for academic interaction revealed that after four years almost 40 percent of the seniors have had an average of less than one seminar per year, 45 percent have never engaged in independent study, and 75 percent have never worked with a faculty member on his or her research. The data for social interaction revealed that freshmen were 25 percent to 100 percent more likely than seniors to have social interaction with faculty as measured by our three indicators. A possible explanation for this is the deliberate effort Stanford makes to bring freshmen and faculty together — an effort that it fails to carry through to any of the other three classes. Finally, the data for personal interaction show that only 32 percent of the seniors have ever sought advice from a faculty member, only 53 percent talked to a professor about life in general during Fall quarter, and only 42 percent have had more than two professors in their entire Stanford experience who seemed interested in them as people. The only heartening finding was that in the Fall quarter of their last year 78 percent of the reporting seniors had talked with their advisors about career plans.*

correlations * were calculated for various types of academic, personal, and social interaction and satisfaction with student-faculty relations. (Table I-13) Despite the fact that these correlations are not exceptionally strong, they do suggest a positive relationship between student satisfaction and the amount of reported interaction with faculty. In addition, we believe the stronger correlations between personal interaction and satisfaction are suggestive of the kind of interaction to which students would respond most positively if it were more available than at present.

TABLE I-13

Gamma Correlations for student satisfaction with student faculty relations, by types of academic, social, and personal interaction

Academic	
Number of seminars in Stanford experience	.05
Ever engaged in independent study with faculty member	NC *
Ever worked with faculty member on his/her research	NC
Social	
Dined with a professor	.28
At a social function at which a faculty member was present	.21
Participated in bull session where faculty member was present	.34
Personal	
Ever sought advice from a faculty member on a personal matter	NC
Ever felt personally close to a faculty member	NC
Talked with professor about career plans	.28
Talked with professor about life in general	.37
Perceived number of professors interested in student as person	.41

* NC indicates that the data for these interactions were nominal and consequently no gamma correlations could be calculated.

** Gamma is an ordinal measure of association developed by Goodman and Kruskal (1954).*

We cannot explain why there is no apparent correlation between student satisfaction with student-faculty relations and the number of small-group seminars that a student has in his Stanford experience. Theoretically, such small group classes should increase student-faculty interaction and hence student satisfaction with student-faculty relations. There are two possible explanations for this surprising datum. First, interaction, for one reason or another, may not be happening in seminars despite the structural setting which should encourage it. Alternatively, students who enroll in seminars may have higher expectations for student-faculty relations than those who prefer to take larger lecture classes.

In addition to demonstrating the relationship between student-faculty activity patterns and satisfaction with student-faculty relations, the Task Force also sought to determine if there was any relationship between student-faculty interaction and four educational outcomes which the Task Force considered central to undergraduate education. These four outcomes were:

1) being challenged to think by a faculty member on a one-to-one basis

2) having had a faculty member extensively critique a paper or project

3) having three or more professors make a significant impact on the student's intellectual development

4) having three or more professors stimulate thinking about ideas going beyond the subject matter of the course

These outcomes were premised on the belief that the role of faculty in a university goes beyond the explanation of material that can be found in books on the shelves of good public libraries. We believe that a major role of the faculty at a university is to stimulate critical thinking among undergraduates — something that the printed page in itself is ill-suited to accomplish. Without the above outcomes occurring, we doubt that faculty can stimulate critical thinking in undergraduates.

The Task Force believes that the four selected outcomes are realistic goals for undergraduate education at Stanford. To ask that *all* faculty members challenge *all* students on a one-to-one basis, or that all papers or projects are extensively critiqued by faculty, would be unreasonable, but we do believe that these experiences should occur periodically over a student's undergraduate career. Similarly, though the Task Force does not expect that all professors could have significant intellectual impact on all students, or that all professors could stimulate the thinking of all their students beyond the subject matter of the courses being taught, we think it entirely reasonable to suggest that several professors should achieve these outcomes during the four years the average undergraduate spends at Stanford.

Unfortunately, we found a low incidence of these outcomes in the undergraduate population at large. Only 40 percent of the students responding to our survey reported that they had *ever* been challenged to think by a faculty member on a one-to-one basis. Similarly, only 41 percent stated that they had *ever* had a faculty member extensively critique a paper or project. Only about one-third of the students responding said that three or more professors had had a significant impact on their intellectual development, while the remainder reported less than

three. In addition, only 38 percent reported that three or more faculty members had *ever* stimulated their thinking about ideas outside the subject matter of the course. (Table I-14) *

TABLE I-14

Selected Educational Outcomes

Outcome		Percent reporting
Ever challenged by a faculty member on a one-to-one basis to really think	Yes	40
	No	60
Ever had a faculty member extensively critique a paper or project	Yes	41
	No	59
Number of professors having a significant impact on the student's intellectual development	None	23
	1-2	45
	3+	32
Number of professors who tried to stimulate ideas going beyond the subject matter of the course	None	10
	1-2	52
	3+	38

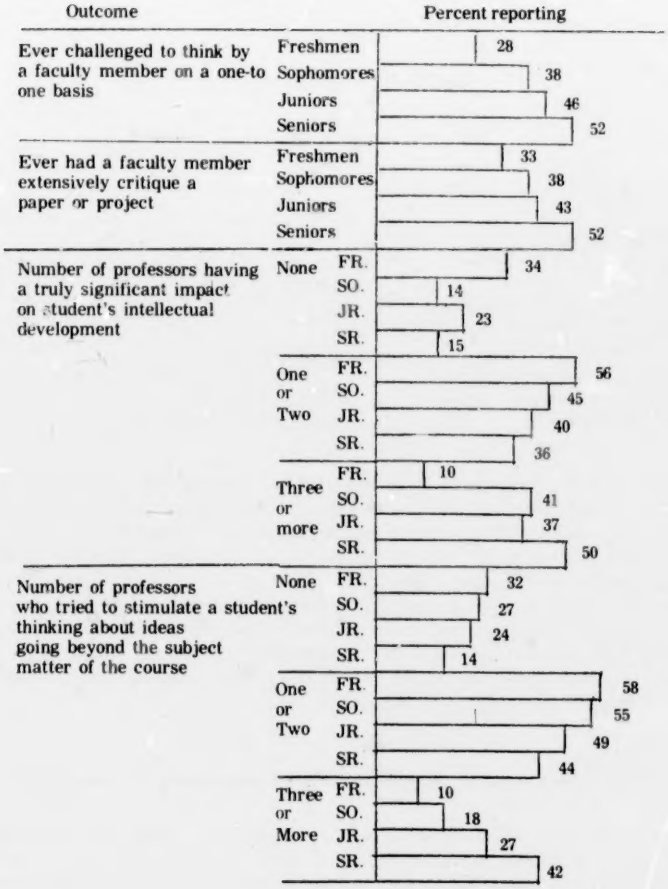
In order to insure the meaningfulness of these figures, the Task Force isolated seniors from the sample to see if they reported significantly higher incidences of the four educational outcomes than underclassmen. (Table I-15) To our dismay, we discovered that 48 percent of the responding seniors stated that they had *never* been challenged to think by a faculty member on a one-to-one basis. The same percentage reported *never* having had a faculty member extensively critique a paper or project. Fifty percent of the seniors stated that two or fewer professors had had a significant impact on their intellectual development, and 58 percent said that two or fewer professors tried to stimulate their thinking about ideas going beyond the subject matter of coursework.

** Clearly, the undergraduate student-body is not monolithic in its make-up and orientation to academic pursuits. Hence, in order to test a secondary hypothesis that those students reporting the four outcomes were most likely to be of a certain type, e.g., more academically inclined, students were asked to read four descriptions corresponding to the Clark-Trow typology of student subcultures and then select the one description which seemed to be most appropriate to them as individuals. The four-part typology refers to a student's primary orientation to college and is expressed by the following attitude groupings: vocational, non-conformist, collegiate, and academic. (See Feldman and Newcomb, 1970)*

In general, cross tabulations for student sub-culture and outcomes revealed that the non-conformist subculture group consistently reported higher levels of outcomes, but the overall spread between subcultures was not large, and only once did the number of students reporting the outcomes from all four subcultures rise above fifty percent. There also proved to be no significant difference in outcome occurence by sex. The differences among students broken down by academic major proved inconclusive.

TABLE I-15

Educational Outcomes by Class



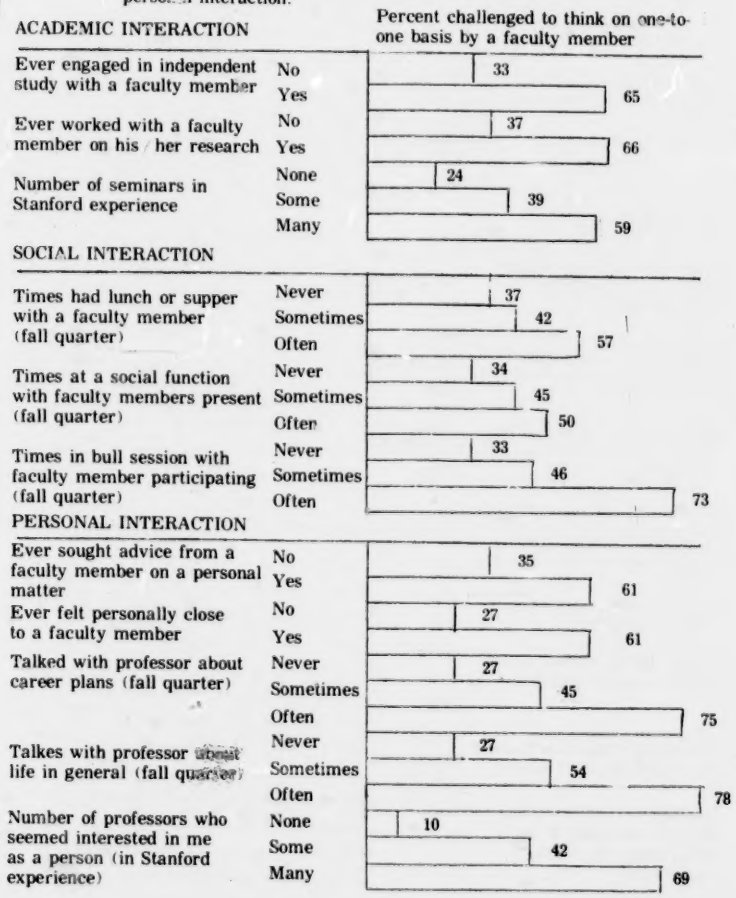
While the incidence of students who reported experiencing the four outcomes (even among seniors) is low overall, for those who *did* experience them, the Task Force found positive and generally strong correlations between the outcomes and the several types of student-faculty interaction noted above. Though only a minority of students indicated high levels of student-faculty interaction, this minority was much more likely to report having professors challenge them to think on a one-to-one basis, receiving extensive feedback on course work, having professors make a significant impact on their intellectual development, and having professors stimulate their thinking about ideas going beyond the subject matter of their courses. By increasing the number of students who have high levels of interaction, we believe the incidence of these desirable educational outcomes will also increase.

Before reporting specific results, it should be mentioned that we are not alone in demonstrating that student-faculty interaction is positively correlated with several important educational outcomes. For instance, researchers at the Berkeley Center for Research and Development in Higher Education identified several correlates of greater interaction. Among them were an increased commitment on the part of students to intellectual concerns, perceived progress in a variety of specific academic skills, a feeling of greater self-awareness, and a stronger intellectual disposition overall.[10] Our study centered on four specific elements of the educational process, further expands this research and lends additional support to the notion that student-faculty interaction is of central importance in the teaching and learning process.

Our results indicate that student-faculty interaction is closely correlated with being challenged to think by a faculty member on a one-to-one basis. As Table I-16 demonstrates, academic, social, and personal components of student-faculty interaction all are positively correlated with this educational outcome.

TABLE I-16

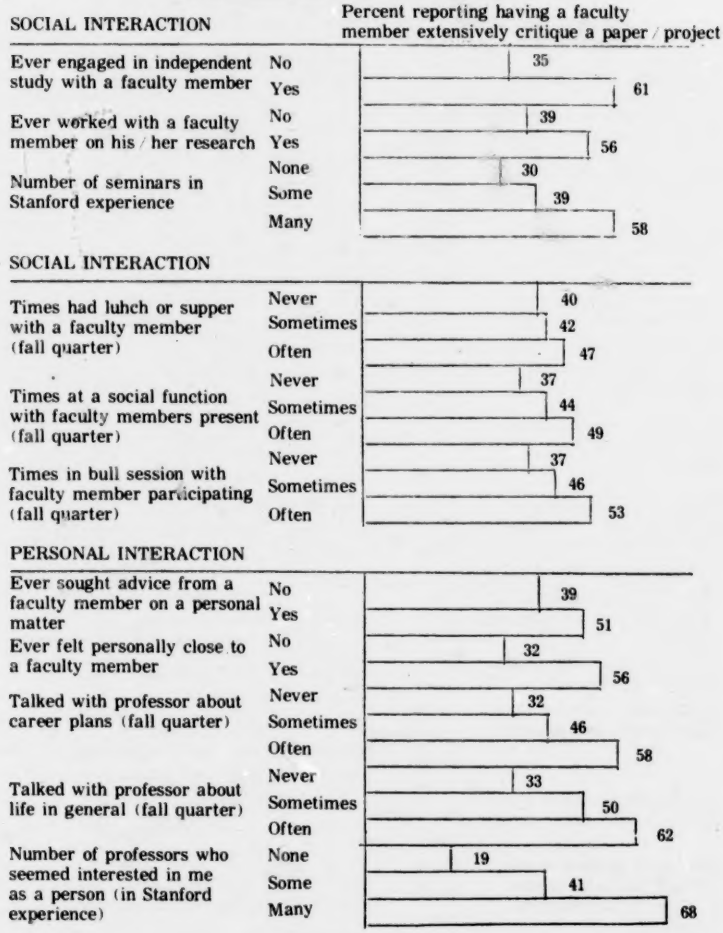
Students who reported ever having been challenged to think by a faculty member on a one to one basis, by academic, social, and personal interaction.


ACADEMIC INTERACTION
Percent challenged to think on one-to-one basis by a faculty member
Ever engaged in independent study with a faculty member
No 33
Yes 65
Ever worked with a faculty member on his / her research
No 37
Yes 66
Number of seminars in Stanford experience
None 24
Some 39
Many 59
SOCIAL INTERACTION
Times had lunch or supper with a faculty member (fall quarter)
Never 37
Sometimes 42
Often 57
Times at a social function with faculty members present (fall quarter)
Never 34
Sometimes 45
Often 50
Times in bull session with faculty member participating (fall quarter)
Never 33
Sometimes 46
Often 73
PERSONAL INTERACTION
Ever sought advice from a faculty member on a personal matter
No 35
Yes 61
Ever felt personally close to a faculty member
No 27
Yes 61
Talked with professor about career plans (fall quarter)
Never 27
Sometimes 45
Often 75
Talkes with professor about life in general (fall quarter)
Never 27
Sometimes 54
Often 78
Number of professors who seemed interested in me as a person (in Stanford experience)
None 10
Some 42
Many 69

Similarly, the Task Force found that the greater the academic and personal interaction between students and faculty, the more frequent the occurence of the second outcome: having a faculty member extensively critique a paper or project. Apparently, as professors begin to know students as individuals, they are better able to constructively criticize their academic performance. Professors seem more inclined to feel the obligation to extensively criticize the work of a student whom they know personally, or one who appears interested enough to promote interaction. (Chapter II explores more fully some of the dynamics of interaction). Table I-17 summarizes the correlation between student-faculty interaction and extensive feedback received from faculty. As can be seen in the table, in contrast to academic and personal interaction, social interaction appears to have a marginal affect on this outcome.

TABLE I-17

Students reporting having had a faculty member extensively critique a paper or project, by academic, social, and personal interaction



This pattern repeated itself with the third outcome: having professors make a significant impact on one's intellectual development. As Table I-18 shows, nearly twice as many students who expressed experiencing various kinds of academic and personal interaction with faculty reported that professors had a significant impact on their intellectual development than those who did not. As with the second outcome, it appears that social interaction is not as significantly correlated with faculty intellectual impact as the two other types of interaction.

TABLE I-18

Students who reported having three or more professors making a truly significant impact on the student's intellectual development

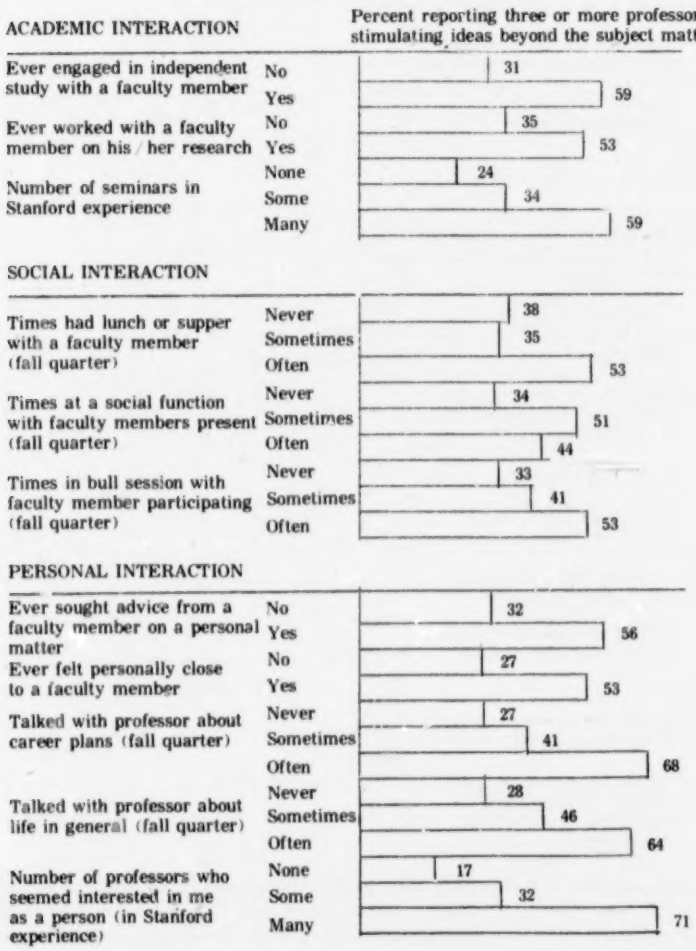
		Percent reporting three or more professors with impact
ACADEMIC INTERACTION		
Ever engaged in independent study with a faculty member	No	26
	Yes	56
Ever worked with a faculty member on his / her research	No	30
	Yes	53
Number of seminars in Stanford experience	None	22
	Some	29
	Many	32
SOCIAL INTERACTION		
Times had lunch or supper with a faculty member (fall quarter)	Never	33
	Sometimes	31
	Often	39
Times at a social function with faculty members present (fall quarter)	Never	31
	Sometimes	32
	Often	10
Times in bull session with faculty member participating (fall quarter)	Never	28
	Sometimes	34
	Often	54
PERSONAL INTEREACTION		
Ever sought advice from faculty member on a personal matter	No	27
	Yes	52
Ever felt personally close to a faculty member	No	21
	Yes	50
Talked with professor about career plans (fall quarter)	Never	23
	Sometimes	35
	Often	64
Talked with professor about life in general (fall quarter	Never	23
	Sometimes	42
	Often	55
Number of professors who seemed interested in me as a person (in Stanford experience)	None	12
	Some	28
	Many	62

Finally, as seen in Table I-19, high levels of student-faculty interaction and the fourth outcome, having professors stimulate student thinking beyond the subject matter of the course, were strongly correlated. Thus, the Task Force found that all

four of the selected desirable educational outcomes were closely related with high levels of student-faculty interaction. The only exceptions were certain components of social interaction (having lunch or supper with a faculty member, being at social occasions where faculty members were present) which seemed marginally correlated with most outcomes. Another component of social interaction, however, participating in bull sessions with faculty members present, registered higher correlations. (This is probably due to certain academic and personal elements of the interaction which also are operative).

TABLE I-19

Students who reported having three or more professors stimulate thinking about ideas going beyond the subject matter of the course



To sum, the composite results of the Task Force survey indicate reason for concern about some important aspects of the quality of undergraduate education at Stanford. Though students express satisfaction with some areas of instruction, satisfaction with student-faculty relations and the advising system is low. This dissatisfaction is reflected in unfavorable student perceptions of faculty as interactors. Moreover, these perceptions of faculty are based on low activity patterns between students and faculty. We believe that such low activity patterns are undesirable for two reasons. First, they apparently add to student dissatisfaction in some critical areas of undergraduate education where the faculty is involved. Secondly, student-faculty interaction appears to be lowest in precisely those areas which are important in the development of critical thinking. By improving student-faculty interaction, both in the classroom and out, the Task Force believes that student satisfaction with student-faculty relations will improve and the incidence of the four desirable outcomes associated with the process will increase. Without an effort to establish more of a community of scholars by improving student-faculty relations, however, we believe that the problems outlined in this chapter will continue to persist.

To identify a problem, however, is not to solve it. In the next chapter, the Task Force attempts to go beyond description and into analysis of why the "other Stanford" continues to exist. Important aspects of Stanford that reinforce the "other Stanford" are certain perceptions on the part of students and faculty, institutional reward structures, and the performance of the Office of the Dean of Undergraduate Studies.

Chapter II

WHY THE 'OTHER STANFORD?'

This report is concerned with one primary issue, the relationship of professors and undergraduates. Our thesis is that the present level and quality of interaction between faculty and students is inadequate and that this condition is linked to the kind of university that Stanford is today. We sought to demonstrate that theme in the first chapter by reporting the results of our survey of undergraduates and by documenting the tremendous changes that have taken place at Stanford since the early fifties. We believe that our data on undergraduate attitudes and activities are disturbing and merit further attention. Before making any recommendations for how to proceed in the future, however, it is first necessary to examine further our perceptions of the problem and to consider some of the factors which we feel either helped create the "other Stanford," or which help maintain it today.

The "other Stanford" exists because faculty and undergraduate students have very little direct contact. In an attempt to explain why this should be so, we have settled on the following four factors which we see as crucial:

- First, that students have not always functioned well in the role of student at Stanford, partly due to their own passivity and partly due to other subtle factors operating within the environment.
- Second, that faculty have not always functioned well as teachers at Stanford, primarily because the system of rewards and sanctions is heavily skewed to favor research over teaching, not necessarily because professors are uninterested in undergraduate education.
- Third, that the *Study of Education at Stanford (SES)* in 1968 failed to adequately consider an issue which we feel is central to the quality of undergraduate education — student-faculty interaction.
- Fourth, that a number of important recommendations of SES, which we feel would have had the greatest impact in terms of strengthening undergraduate education overall, still have not been implemented even five years after the report was issued.

Students as Students

The proper role of the student *qua* student has seldom been a matter for consideration in American higher education. In fact, more often than not, the responsibilities of students in promoting their own educations have been glossed over lightly by themselves and the society in general. It is not our intent here to offer a long checklist of do's and don't's for students, but we are concerned with the role which students must play *vis-a-vis* the faculty in the teaching and learning process.

Certainly, one of the most important activities students have as students is to utilize the faculty as a learning resource. In order to do this, students must seek out their professors in order to inquire, challenge, and probe. Support for the notion that students at Stanford often fail to carry out this aspect of their role as a student comes from both faculty and student sources. A few students who responded to the Task Force survey, for example, blamed themselves directly for not having had more interaction with their professors. The following "free comments" received on questionnaires are indicative:

—Very true [that students don't see faculty], but it is mostly the students' fault. How many of us try that hard to communicate personally with faculty?

—[Interaction] depends upon the individual student and teacher. Often the student who complains about lack of communication never takes the initiative

[and] wants it all handed to him. If he did, he'd find out that the profs are interested and interesting.

—Most students don't try to see teachers out of class. Grades and competitiveness from students are more inhibiting than faculty.

—Most of the professors I have had seem willing to get to know their students, but I have not taken the initiative.

—Most of my dissatisfaction with student-faculty relations is dissatisfaction with my own failure to initiate them. I think all my professors were willing and happy to speak with students. Only once did I not get the kind of attention I sought from a professor.

Various faculty perceptions of students as students also are revealing. A faculty view of students, and of student-faculty interaction in general, was obtained by members of the Task Force in interviews with over 25 professors in four departments of the University (History, Economics, Math, and Civil Engineering). Professors interviewed were in general agreement that the level of student-faculty contact is poor. In attempting to explain this, they often cited the following criticisms of students:

—Students do not use faculty office hours effectively. In fact, many do not use them at all; but those who do, too often use them merely for the purpose of arguing about a grade or assignment, or for the purpose of obtaining a signature on a study card.

—Students often give the impression of being disinterested in their classes; consequently, faculty members perceive that students have no desire to get to know them.

—Students don't raise enough questions in lecture-type classes.

—Students sometimes are not sensitive enough to the flow of discussion in small seminars and colloquia, or they are such aggressive participants that they appear to the faculty to be sabotaging the class.

—Students often fail to take advantage of the avenues for greater personal interaction that are presently available (e.g., independent study and directed reading).

The reasons students do not more often promote interaction with faculty are complex. For instance, it has been widely documented that many students, during their late teens and early twenties, undergo significant upheavals in their personal development which temporarily incapacitate them from engaging in the steady, hard labor of learning and involvement in give-and-take relationships with certain adults.[1] Poor peer models also have been cited as an apparent cause of students failing to carry out more of the responsibility for interaction with the faculty.[2] We do not wish to deny the existence of these two factors; however, in keeping with the specific focus of this report on student-faculty interaction within the Stanford context, we have decided to concentrate attention on two other reasons which may explain why students do not promote more student-faculty contact.

First, we believe that many students are too passive. Although we have little empirical support for this contention, we nevertheless feel that the low interaction patterns reported in Chapter I are not entirely the fault of professors. We are not sure if this is true because students come to the University in a passive state, or because they feel that the benefits derived from a Stanford education are more a

function of being enrolled here than being involved in learning, or because the combination of sun and San Francisco is simply too enticing. We do believe that undergraduates need to make more of an effort to promote interaction than they have in the past.

Second, notwithstanding the need for students to make a greater effort, we also believe that they often are inhibited from initiating interaction by a whole set of subtle cues existing within the environment that suggest to them such relationships are not desired by faculty. The following list of factors is incomplete, but symptomatic of what we mean. Only the most aggressive, entrepreneurial students are likely to be undaunted from attempting to promote interaction in the face of these cues.

—Official departmental policy in some instances (e.g., History) excludes independent study from counting toward credits required for a major in the field.

—Some professors hold office hours in the mornings when many students who might take advantage of them have the heaviest class loads, or else at lunchtime so that "only those students who really have something to talk about will bother."

—Students with scheduled appointments during office hours must sometimes wait for long periods of time before seeing a professor for a five or ten minute session.

—Many professors we interviewed admitted to knowing most of their advisees as no more than study lists.

—Some professors treat the process of student-faculty interaction cavalierly, as evidenced by the following comment we received during an interview: "students simply have to be more aggressive so as to catch me when I'm in."

An immediate conclusion that might be drawn from this listing is that professors simply don't care at all about undergraduates or undergraduate education. As already reported, however, our data indicate that even students who are sometimes the victims of the above practices nevertheless believe that the faculty does care about quality in undergraduate teaching and related activities. To understand this apparent contradiction it is necessary to look at faculty in their role as teachers.

Faculty as Faculty

Over the past few years, much information has been collected about the attitudes and activities of the Stanford faculty.[3] These data show that, by and large, the faculty is concerned about the quality of its teaching. Indeed, our own interviews with the faculty supported this view, and students also corroborated it. Data from our questionnaire showed that fully 89 percent of the undergraduates responding to the survey felt that most professors seem to "care about the quality of their teaching." A problem arises, however, when the rest of our data about interaction patterns are considered. If the faculty is committed to teaching undergraduates, why doesn't more interaction occur? We already have considered the view that students must play a part in improving student-faculty communication, however, it is clear that faculty have a responsibility as well. We believe the answer to this question lies in the context within which the faculty must operate at Stanford.

The notion that undergraduate education often must take a back seat to other faculty activities in a university is certainly not a new idea. The data presented in the first chapter strongly suggested this fact. Indeed, many of the data collected by others on faculty activities and preferences support the view that Stanford professors are enmeshed in a web of pressures that force them to give less of

themselves to the task of undergraduate education than they sometimes would like. The whole system of institutional rewards and penalties is geared to research and not teaching. Various studies of the Stanford faculty, for instance, have shown that:

—Less than 25 percent of the faculty's time is spent in teaching and advising undergraduates. For the most part, the reason for this stems from too heavy a research load.[4]

—Almost half of the faculty feel that "publish or perish" describes their present or past situation at Stanford.[5]

—According to professors, teaching plays a relatively minor role in gaining promotion and tenure compared to research.[6]

—Seventy-eight percent of the faculty feel that research is a very, or extremely influential component of the reward system.[7]

Even a cursory examination of the appointment and promotion policies and procedures at Stanford suggests why faculty hold many of these attitudes and engage in certain activities to the exclusion of others. Stanford's commitment to the pursuit of institutional scholarly eminence is the foundation of appointment and promotion policy, and this commitment is formally reinforced for the typical faculty member at three different points in his career.

1. *It is reinforced at the time of the initial appointment.* When a department receives authorization from the appropriate dean for a new faculty appointment, an ad hoc screening committee is established to develop lists and evaluate qualified candidates. Letters of reference are solicited from academicians outside Stanford, asking for the comparison of the candidate with others of recognized national excellence. The committee evaluates the candidate's published works and compares them with those of other successful new scholars. Almost all of the committee's efforts are concerned with the candidate as a scholar. The committee may solicit evaluations of the candidate's teaching ability, but this evidence is ordinarily looked at with some skepticism since these evaluations are quite often written by a candidate's graduate advisor who is attempting to place the young scholar. This is a difficult problem to overcome, of course, and sometimes an attempt is made to ascertain the teaching ability of a candidate by inviting him or her to deliver a lecture or conduct a seminar session in the area of expertise. It must be noted, however, that this is a "one-shot" effort, and ordinarily undergraduates are not included in the assessment process.

2. *It is reinforced at the time of the tenure decision.* The decision to confer tenure is undoubtedly the most important in the professional career of a young academician. From the perspective of the University, this decision is regarded as essential in maintaining its commitment to quality as an institution. If the candidate is presently a member of the Stanford faculty, the departmental chairman and dean of the appropriate school will review his file and solicit comparisons of the candidate with comparable national scholars from eminent academicians outside Stanford. The file is composed of the candidate's published papers and books and must also include documented evidence of teaching ability. Two factors, however, serve to reduce the potential influence of the teaching evidence in the tenure decision. First, the University does not require a uniform system to indicate teaching effectiveness. Although standardized forms for student evaluations have been devised, they are not required to be used, except in the School of Engineering. A candidate or department may choose to submit and utilize the impressions of colleagues, random student interviews or student evaluations. This lack of consistency increases the difficulty of accurately measuring classroom performance. The second factor is the University's enduring concern for scholarly eminence.

The impact of the tenure decision accentuates the need to take painstaking efforts to insure that the candidate is on the frontier of his or her field. Teaching is not ignored; however, an outstanding teacher with less than superlative scholarship potential does not have the same fortune as a scholar whose research credentials are first-rate but whose teaching is only marginal. It is made quite clear to the assistant professor striving for tenure at Stanford that research accomplishment is a must if he is to remain.

3. It is emphasized once more in the review of a faculty member after he has gained tenure. It is mandatory that a faculty member with tenure be considered for promotion to full professor within six years. This promotion increases the stature of the individual professor within his discipline and the University, and is accompanied by a salary increase. Evidence of teaching is not required for this promotion. In most instances, this is an automatic step, and once gained, the rank of full professor, among other things, carries with it complete freedom from any further formal evaluation by the University.

We are aware of the fact that Stanford's system of rewards and sanctions is, in part, a manifestation of a larger structure that extends far beyond the campus. It is perhaps this situation, more than any other, which inhibits the potential for substantive change at the local level. Several authors in the past have noted that the primary loyalty of faculty members lies with their discipline and not the institution in which they work.[8] In many respects, this situation is analogous to the case of medical doctors, whose professional loyalties lie with the profession of medicine and seldom with any particular hospital, clinic, or town where they may be practicing. But this situation has led one experienced observer of American higher education to characterize the university as a "guildocracy."[9] That is, the university as an institution operates according to the basic *modus operandi* of the guild which involves faculty self-regulation, policing, protection, and the promotion of common interests.

It seems clear that, at Stanford, the system of rewards and sanctions is an extension of the guild structure geared to the production of research and only secondarily to the improvement of undergraduate teaching and learning. Individual faculty are not to be faulted for this condition necessarily, for they are as much victims as advocates. What needs to be clarified, however, is the question of faculty commitment to undergraduate education. To say that professors care about the quality of their teaching is not the same as saying they are fully committed intellectually and emotionally to undergraduate learning. Indeed, it is more fact than assertion to suggest that, given the present environment, professors, if they are to be successful and survive, simply cannot be as committed to teaching as they are to research. Clearly, the burden on faculty is great, for it is this situation which in large measure is responsible for the existence and maintenance of the "other Stanford."

An additional point needs to be clarified as well. One of the oldest debates in university circles is centered on whether or not a basic conflict exists between teaching and research. Some believe that the conflict is more mythical than real because the generation of new ideas associated with university research leads naturally to exciting teaching at the undergraduate level. Others suggest that the conflict is indeed real because, given the increase in research specialization of the past two decades, the ideas and findings generated are too narrowly focused and too advanced for most undergraduates.

Whereas both sides in the conflict have some good arguments, it seems to us that the disagreement is based largely on a restrictive view of what constitutes excellence in teaching. The discussion is centered primarily on the component of instruction and ignores altogether the broader definition of teaching which in-

cludes the component of interaction between teachers and students. Thus, we believe that the substance of the conflict has been misdirected. There may or may not be any inherent conflict between research and the instructional component. The important point is that the mere presentation of information is not the *summum bonum* of teaching. As we have demonstrated above, a number of important educational outcomes are closely correlated with interaction. Our data also show that students at Stanford are satisfied with the quality of instruction while at the same time they are clearly dissatisfied with faculty-student relations. What this may suggest is that research does indeed stimulate excellence in information presentation even while it dulls a teacher's commitment to the human side of teaching which involves interaction with students and the promotion of learning.

Earlier, it was suggested that there are many subtle cues within the Stanford environment which are noticed by undergraduates that act to inhibit them in promoting interaction with the faculty. Likewise, we believe professors who are truly concerned with the promotion of better student-faculty interaction and the improvement of undergraduate teaching in its broadest sense cannot lightly dismiss the implications of the following subtle factors and attitudes present within the Stanford environment which detract from teaching and learning.

—The first edition of the Stanford *Faculty Handbook* issued in 1972-73 contains a whole section of principles, guidelines, and criteria covering research, but no mention is made of similar provisions governing the practice of teaching. Indeed, the word "teaching" does not even appear in either the Table of Contents or the index! The 1966 Statement on Professional Ethics issued by the AAUP contains a section on the obligations of the teacher toward his students which easily could have been adapted or used verbatim.

—Although there are several committees of the Faculty Senate concerned with the practice of research within the University, there is no one committee which devotes its attention primarily to the improvement of teaching on the undergraduate level. *

—If given the opportunity, a majority of the faculty would teach the same number of courses as they do now or fewer, and do more research.[10]

—Professors who have a preference say they favor teaching graduate to undergraduate students.[11]

—Professors want to be evaluated more on their teaching than they are at present, but still prefer that it be weighted less than research overall.[12] Furthermore, over-involvement in teaching is seen as a "negative factor" by many professors.[13]

—Some professors report that they don't like to teach undergraduates because they aren't "intellectually stimulating."[14]

In addition to the various roles played by students and faculty in maintaining the "other Stanford," two other important factors also must be considered. Both relate directly to the major study of undergraduate education conducted at Stanford between 1968 and 1970 known as SES *(The Study of Education at Stanford)* First, the study, although purporting to be comprehensive, failed to examine adequately the nature of undergraduate teaching and learning. Second, although

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** The Committee on Undergraduate Studies, which might have fulfilled this role, unfortunately too often has become bogged down in matters only peripherally related to the improvement of teaching and faculty-student relations (e.g., requirements, credit review, SWOPSI and SCIRE autonomy debates, etc.).*

the report was faulty in design, it at least was successful in generating some worthwhile suggestions for strengthening undergraduate education. Unfortunately, however, some of the most crucial of these recommendations have yet to be implemented.

Student-Faculty Interaction and SES

The stated purpose of the *Study of Education at Stanford* was to reexamine the nature of undergraduate education and universities. Its recommendations were to be designed to contribute to the success of Stanford's primary task, "the intellectual and humane development of men and women."[15] The Steering Committee for the study emphasized two important themes about undergraduate education: first, that education is a continuous process of discovery, and second, that students cannot be forced to learn. It was concluded, therefore, that students ought to be given a great deal of independence within an overall ethos conducive to learning. The role of the University would not necessarily be to turn students loose to "do their own thing" and then react with indifference, but to give means and assistance without compulsion. It was felt the University could not educate people as such, but it could supply the environment and the means necessary to insure that those coming to it could educate themselves and others.[16]

Despite its philosophical concern with educational environment and means, SES seemed to avoid any serious analysis of these important elements. Though adequately conceived, we believe that the study was poorly designed and executed. Indicative of this was the approach taken in Volume VIII, entitled "Teaching, Research, and The Faculty." This report, which could have been an in-depth investigation into the nature of undergraduate learning in a research university, was instead a collection of twenty faculty essays replete with cliches and much conventional wisdom. It was probably the meager content of this volume and its failure to attempt any true analysis of the ingredients of quality teaching and learning that led one observer, Dwight Ladd, to write in a book about academic innovation for the Carnegie Commission on Higher Education:

> In spite of the fact that a tremendous amount of attention has been given to undergraduate education at Stanford, there has been little direct confrontation with the nature of education in its broadest sense... If any of the problems of education at Stanford are related to the behavior of faculty members and their attitudes toward students and toward the substance and process of teaching and learning, it is not particularly apparent in the proposals made thus far...[17]

We agree with the philosophical position taken by the Steering Committee about the necessity for innovative independence for undergraduate students, but in our opinion SES failed to realize its objective of dealing in a critical way with the setting for undergraduate education. As Ladd put it, "specific changes have been approved and / or rejected without any serious thought having been given to the context in which they are being considered."[18] It seems to us, given the nature and findings of our own investigations and those of other researchers, that a more thorough analysis, probing nearer to the core of the teaching and learning process, could have been achieved.

Despite these criticisms of the way in which SES was conducted, we nevertheless believe that several of the recommendations made were potentially of great significance to the improvement of undergraduate education at Stanford. Unfortunately, however, many of the most important of these recommendations remain untried even five years after the completion of the study.

SES After Five Years

It was recognized by SES that merely to suggest changes without providing the means for its implementation would be an irresponsible course of action. Hence, in one of the most important recommendations made, SES created a new administrative entity known as the Office of the Dean of Undergraduate Studies (ODUS). Since the office was envisioned by SES as being vital to the well-being of undergraduate education and because it continues to play a central role today, it is important to review its original mandate and survey its progress to date.

The Office of the Dean of Undergraduate Studies was first established in 1970, and Professor James Gibbs, Jr. of Anthropology, himself a distinguished teacher of undergraduates, was appointed Dean. According to SES, the Dean of Undergraduate Studies was "to exercise continuing review of Stanford's education of undergraduates, to support and maintain what is good, to aid in the renovation of what is inadequate, and to stimulate and assist in educational innovation."[19] It was hoped that the Dean would "become the University's prime advocate for the interests of undergraduate education in its academic or curricular aspects, with special emphasis on its development and renewal."[20] That the Dean was to be more an advocate than a manager of services was reflected in the SES statement that the talents called for by the proposed post were "not primarily managerial or bureaucratic" but rather include "tact, educational sensitivity and the ability to minimize resistance to change."[21]

Since its creation, the Office has engaged in a number of projects and studies. Among them are the Academic Information Center, the Undergraduate Writing Center, the Learning Assistance Center, and a system of advising. In addition, the Office has also given support to intra-departmental and extra-departmental programs. But at the same time, our interviews with numerous faculty, administrators, and students have indicated dissatisfaction with its performance. The most frequent criticism expressed is that the Office of the Dean of Undergraduate Studies has developed into a large bureaucracy with frequent reports and investigations but marginal accomplishments. The current Dean's extensive commitments to non-ODUS activities are also cited as curbing the effectiveness of the Office.

Defenders point to several mitigating factors. First, as a new office it has taken time for ODUS to define its role and its relations *vis-a-vis* other university structures. Secondly, only recently has a stable staff been assembled to assist the Dean. Thirdly, there have been financial limitations on what it could reasonably accomplish. Fourth, the Dean has needed time to acclimate himself to his new role as administrator.

We recognize these problems; nevertheless, we feel compelled to add our own criticism to that of others who express concern over the fact that many key recommendations of SES, important for the improvement of undergraduate education, still have not been implemented five years after the study was completed. For example, to our knowledge, there has not been any substantial expansion in the "whole area of independent studies and honors work" as SES suggested.[22] A general education college which SES saw as a "shared intellectual experience, a focus on the heritage of Western civilization and a transcending of departmental or disciplinary lines"[23] has not been created. A Teaching Resources Center, although one of the current Dean's top priorities, has yet to be funded. In addition, the Office of the Dean of Humanities and Sciences, according to some observers, has been a greater advocate of student evaluation of teaching than the Office of the Dean of Undergraduate Studies, which was charged with the task by SES.[24]

In sum, the Task Force, while not wishing to minimize the positive steps already taken by the Office of the Dean of Undergraduate Studies, feels that it has contributed indirectly to the maintenance of the "other Stanford" by failing to assume a more forceful role within the University community in behalf of undergraduate education. We are not unmindful of the fact that many attractive avenues of change may carry with them financial constraints, but at this point in time, we view the problem of finances more as a matter of priorities than empty coffers. Moreover, "programs" may not always be the best way to help change the basic ethos of undergraduate teaching and learning, which is where we feel the problem lies.

It was the purpose of this chapter to investigate some of the reasons for the "other Stanford" as we described it in Chapter I. Clearly, the promotion of faculty-student interaction is a two-way street, and both faculty and students have a responsibility for travelling it in the interests of improving undergraduate teaching and learning. Both groups are inhibited, however, by the institutional setting of Stanford in 1973, with its reputation for research competence, and are trapped in an ethos that is detrimental to high-quality undergraduate learning. We believe that a concerted effort must be made to try to change this ethos. Hence, in the next and final chapter we suggest four broad objectives which we believe must be adopted in order to overcome the "other Stanford." For each objective we offer some specific mechanisms for change which we feel will help improve Stanford in the years to come.

Chapter III

CHANGING THE OTHER STANFORD

The paramount objective of this report is to initiate a debate within the Stanford community and elsewhere about the quality of student-faculty interaction. By concentrating specifically on interaction, we have tried to expand the standard definition of teaching to include not only the presentation of information but also the more intensely personal act of promoting learning. The recommendations below represent the Task Force's best attempt to effectively resolve the student, faculty, and institutional problems outlined in the previous two chapters. We feel them to be sound, but not sacrosanct. They are being offered primarily as proposals for discussion, not as complete and unalterable solutions. It is our hope that they will receive wide attention, will generate productive debate, and, in the end, will be seriously considered for implementation.

The recommendations are organized around four general objectives which, if achieved, we believe will help to alleviate some of the major problems that characterize the "other Stanford." Specific implementation mechanisms by which to realize these are offered under each objective. The four objectives which the Task Force recommends are:

I. an enrichment in the level and quality of student-faculty interaction;

II. a restructuring of the University's faculty evaluation and reward system;

III. a redirection of the efforts of the Office of the Dean of Undergraduate Studies so as to increase its effectiveness as an advocate for undergraduate education; and,

IV. a greater awareness by undergraduates of the benefits of interaction with faculty members, and of the necessity to participate in the initiation of it.

Objective I

AN ENRICHMENT IN THE LEVEL AND QUALITY OF STUDENT-FACULTY INTERACTION

The results of the 1973 Task Force survey reveal a low level of student-faculty interaction and considerable dissatisfaction among undergraduates with this aspect of their education. Given these findings, we believe that a central thrust of innovations in undergraduate curriculum, teaching methods, and advising at Stanford over the next ten years should be to increase student-faculty interaction of all types.

Mechanisms for Implementation

1. Each department should actively support an undergraduate student association.

As the primary academic unit in the University, the departments are an obvious structure within which to encourage greater student-faculty interaction. The Task Force recommends that students, with the support of departmental faculty, organize undergraduate associations within each department. These associations would, as one of their principal functions, hold frequent symposia where professors and students in the department would discuss topics of common interest. Possible topics for these symposia might include latest changes in the discipline, ongoing faculty research projects, proposed new courses, and student expectations of teaching in the department. When appropriate, outside speakers from other universities or the surrounding community could be invited. Each department would provide its association with supplies, clerical assistance, and, if needed, postage for flyers. (See also Objective II, sub-objective two, mechanism three and Objective IV, mechanism two for discussions of the role of these associations in departmental governance).

2. Papers and examinations should be more extensively critiqued than at present.

Papers and examinations presently serve the dual purposes of teaching students how to gather, analyze, and present knowledge, and of testing their proficiency at these three tasks. The Task Force feels that they could serve the additional purpose of being facilitators of student-faculty discussions. Few things are more frustrating for students than to receive papers and examinations back with only a few brief comments, regardless of the grade they receive. We believe that more frequent discussions about academic work would provide students with increased feedback, stimulate creative and critical thinking, and increase student-faculty interaction.

We put forth three specific suggestions as to how to use papers and examinations to increase the frequency and value of student-faculty discussions. First, we suggest that professors tape record their comments about student work on individual cassettes (provided by the student) rather than write comments on the margins of papers. Students would replay their cassettes, following the comments with their own copy of the paper or examination. We believe that using cassettes would save faculty time, increase the quality and quantity of comments, and provide the backdrop for later discussions about the paper between the individual student and the faculty member. The second suggestion is to make, routine for all classes of fifteen students or fewer, individual discussions of student papers and examinations. The third is that students, whenever possible, should rewrite their papers after having discussed first drafts with their professors.

3. Advisors should de-emphasize their role solely as sources of class information, and should instead seek to facilitate their advisees' intellectual and emotional growth.

The Task Force survey results show that undergraduates are not satisfied with the present advising system. It seems that their disenchantment stems in part from the present system's emphasis on the advisor as a source of class information and as a signer of academic documents. We feel that this is an inappropriate role for them to play, particularly since students attest to receiving better class information from their peers than from their advisors. The role the Task Force suggests for advisors is that of mentors seeking to facilitate their advisees' intellectual and emotional growth. One mechanism by which to encourage this type of relationship would be to have undergraduates take a directed reading from their advisor on a topic of common interest. A second mechanism would be that of having students take from their advisor a tutorial focusing on some specific project. We believe that situations such as these would lead to more fruitful interaction between students and their advisors than the present one which too often consists primarily of discussions revolving around *Courses and Degrees* and units needed to graduate.

4. Teaching assistants should be required to have some training in effective interaction before they teach undergraduates.

The fact that, at present, graduate Teaching Assistants are given little or no orientation prior to assuming a teaching role in the classroom makes them highly vulnerable to perpetuating the *status quo* situation where presenting information is much more highly regarded than is the promotion of learning. Moreover, all too often T.A.'s are not adequately skilled in either area.

The Task Force feels it is unfair to both undergraduates and graduate teaching assistants alike to thrust T.A.'s into the classroom without some prior training in teaching techniques and effective interaction in section classes. We believe that some basic techniques are known and can be taught that will help produce good teachers and interactors.[1] We propose that each department devise its own procedures by which its graduate students are exposed to and practice effective teaching. One procedure might be for teaching assistants to conduct small group discussions which are video-taped. Their performance then would be reviewed either by the individual or by a group of fellow graduate students or professors, and suggestions for improvement put forth. A second device might consist of a series of departmental seminars conducted by teams of successful faculty teachers who would discuss techniques they found helpful. Many other possible procedures exist. We are not prepared to be prescriptive about what specific preparation teaching assistants should have, but we do think they should receive some kind of training before they face undergraduates in the classroom. (See also Objective III, mechanism one, for the role a Teaching Resources Center might play in training teaching assistants).

5. Professors should offer more undergraduate courses about their ongoing research.

Although faculty research generally has had an inhibiting effect on interaction in the past, the Task Force believes that certain steps can be taken to better integrate the two in the future. Our data indicate that students who have worked with faculty on their research report a higher incidence of educational outcomes and greater satisfaction than those who have not. Since it is clearly not possible for every student to become involved with a faculty member's ongoing research, the Task Force proposes that professors offer courses in which they present their current research to undergraduates. Interviews with faculty who have offered such courses reveal they believe that sharing their research with undergraduates

is both of help to them in conducting future research and of significant value to undergraduates. The Task Force believes that it would require minimal effort for faculty to prepare for such courses. We further believe that the primary thrust of such courses should not be informational, but rather to enable undergraduates to understand both the approach to a problem and the set of mind used by a professor in his discipline.

6. Office and advising hours should be held at times more convenient to most students.

We do not feel that student-faculty interaction is encouraged by faculty holding office hours in the morning when most students have their heaviest course loads, or over the noon hour. We suggest that more hours be scheduled in the afternoon. We further suggest that faculty teaching seminars of fifteen or fewer students consider meeting with each one in the first week of the class to individually discuss with the student his or her interests and what he or she hopes to gain from the course.

Objective II

A RESTRUCTURING OF THE UNIVERSITY'S FACULTY EVALUATION AND REWARD SYSTEM

Task Force interviews with faculty members found that many professors would welcome more interaction with undergraduates, but that Stanford's present evaluation, appointment, tenure, and promotion system discourages, if not negatively sanctions, such interaction. Clearly, this institution is not unique among prestige, research-oriented universities in this regard, but this does not justify continuation of the present system. Stanford should take a leadership role among those institutions with which it identifies by reorienting its evaluation and reward structure so that undergraduate teaching is more on a par with research and scholarship. The Task Force feels strongly that only when Stanford has redressed the imbalance in its internal performance criteria induced by the research-sponsored growth of the late 1950's and 1960's, will professors begin to engage more freely in interaction with undergraduates without fear of committing professional suicide.

To more clearly present the mechanisms we feel would help redress this imbalance, we have broken our second objective down into three interconnected sub-objectives. These sub-objectives reflect our assessment of the minimal changes we feel ought to occur in the present faculty reward system.

Sub-Objective 1

AN ALTERING OF BOTH THE TYPES OF INFORMATION COLLECTED ON TEACHING ABILITY, AND THE METHODS BY WHICH THAT INFORMATION IS GATHERED.

The Task Force believes that there are some serious biases in Stanford's present information-gathering process. We believe that both by the type of information gathered and the methods by which it is gathered, Stanford subtly informs faculty members that teaching is not a high priority activity relative to research. By redressing the imbalance, we believe that professors will be encouraged to interact more with undergraduates, and that the personnel decisions made about those who do interact with undergraduates will be more favorable than at present.

Mechanisms for Implementation

1. The University forms used in student evaluations of teaching should be revised to include questions about interaction and perceived educational outcomes.

The Task Force believes that teaching is something broader than presenting information. It also contains the component of student-faculty interaction. This report shows that, in contrast to instruction, undergraduates at Stanford are very dissatisfied with the present level of interaction. It and other studies[2] further show that such interaction is related to both student satisfaction and educational outcomes.

Present University forms fail to gather any information about this valuable teaching component. We therefore recommend that the forms be modified to include questions about student-faculty interaction and perceived educational outcomes similar to those asked on our questionnaire. The resulting data would contain information on two aspects of every professor's teaching ability: his proficiency as an instructor and his effectiveness as an interactor. We view the

gathering of this information as one of the most meaningful steps the University can take to communicate to the faculty that such interaction plays an important role in undergraduate education.

2. Student evaluations of teaching, broadened in scope to include questions regarding student-faculty interaction, should be standardized throughout the University and should be made mandatory.

At present, student assessments are gathered primarily when a professor is being considered for tenure. Though as professionals, professors are presumed to be concerned about continually improving their teaching, disappointingly few seem to use the University student evaluation forms to gather information about their teaching ability and to isolate aspects that merit improvement. Furthermore, student evaluations, when used, do not automatically become part of a professor's University evaluation file. Rather, professors often are allowed to self-select which student evaluation information is sent to their review committee. Finally, information submitted for faculty evaluation files need not come from the present University student evaluation forms; it can come from solicited student letters about a professor's teaching or from a professor's self-designed questionnaire.

The Task Force feels that this information system has serious flaws. First, as mentioned earlier, it in no way insures that any information is gathered about a professor's effectiveness as an interactor. Second, it does not provide either the professor or the University with any historical information about his or her teaching ability. Third, because the information submitted can be self-selected by the professor, it can be skewed to present a favorable picture of his or her performance. Fourth, and perhaps most important, the methods by which the information is gathered are not uniform, thereby making it impossible to establish any minimum University-wide teaching-ability standard.

To correct these shortcomings, the Task Force recommends that a representative sample of the undergraduate classes taught by any given professor be, on an annual basis, regularly and mandatorily evaluated. The results of these evaluations would be sent to the professor being evaluated, who would be free to react to them in writing if he wished. These results and reactions would then become a permanent part of the professor's evaluation file.

In order to establish a minimum University-wide teaching-ability standard, all professors would be evaluated by students using the same form. As is presently done in the School of Engineering, all professors would receive comparative departmental and University-wide rankings that would make them aware of their relative performance on several instruction and interaction criteria. These standardized forms would not preclude departments or professors from using additional evaluation mechanisms, but such mechanisms would be supplemental to, not used in place of, this common form.

The Task Force is aware that some departments have little faith in the present University form. We feel that these departments should consult with the Subcommittee on Student Evaluation of Teaching of the Committee on Academic Appraisal and Achievement to have the form changed to meet their objections. We must note, however, that while some of their objections to the present form are valid, we do not agree with those who argue that measurable instructional criteria, general enough to be applicable to all departments, cannot be developed.

3. Faculty "collegial consultations" about teaching should become routine practice.

We believe that, as professionals, faculty ought to become more involved in the observation of each other's teaching.[3] It is envisioned that each faculty member would sit in on a class of one of his departmental colleagues chosen at random.

Then, as soon as practicable, the two faculty members would discuss the session over coffee or lunch. This meeting would be devoted to any constructive criticism the faculty member may have of his colleague's performance.

The frequency of these consultation sessions would be left to the discretion of individual departments; however, we feel that as a minimum, each professor regardless of rank, should participate in such consultations at least twice during each academic year.

It should be noted that we are not interested in this mechanism as a make-work plan. We strongly believe that there is too little ongoing discussion by the faculty about teaching and that there is little reason for classroom teaching to be any less public than is research. We feel that the increased interaction between faculty members on the issue of teaching will help to further strengthen its quality at Stanford.

4. A greater attempt should be made by departmental search committees to obtain information about the teaching ability of prospective candidates.

A large proportion of present Stanford faculty members have taught at other institutions before accepting an appointment at this University. It seems likely that this pattern will continue in the future. This observation, coupled with the fact that many faculty members are appointed, in part, to instruct undergraduates, leads the Task Force to conclude that any information about the teaching ability of prospective candidates should be obtained and considered before a final candidate is selected. Though we realize that the information is often unavailable or of dubious validity,* we nevertheless feel that it is better than having none at all. Hence, we recommend that, in those departments where it is presently not done, search committees make formal requests for evidence of teaching ability for all candidates under consideration for positions involving the instruction of undergraduates. One means by which this might be accomplished would be to solicit letters of evaluation from students at other institutions.

5. Before an offer of appointment is made, all prospective candidates should give a lecture and seminar which both undergraduates and faculty evaluate.

A lecture and seminar presentation presently are required by some departments of their candidates so that the department can assess, among other things, their teaching ability. The Task Force believes that this practice should be adopted by all departments and be required of all candidates for positions that would involve instructing undergraduates. We feel that evaluations of their presentations would enable search committees to better identify good teachers, and would help lessen the two problems, noted in the previous mechanism, that are associated with information requested about candidates from other institutions.

As envisioned by the Task Force, undergraduates and faculty would be invited to these presentations and would evaluate the teaching abilities of candidates using the Stanford forms. Their evaluations would be forwarded to the search committee for serious consideration. We would urge search committees not to appoint anyone whose teaching competence at another institution was evaluated as falling below the University-wide average.

** It is of dubious validity because the information received often comes from the candidates doctoral advisor who has a vested interest in providing laudatory information about his student's ability, thereby increasing his chances of receiving a job offer.*

Sub-Objective 2

AN INCREASE IN THE INFLUENCE OF INFORMATION ABOUT TEACHING ABILITY IN THE KEY EDUCATIONAL DECISIONS OF FACULTY APPOINTMENT, TENURE, AND PROMOTION.

Even though an organization may generate new information, that information may be totally ineffective in influencing the evaluation and reward system unless consideration of it becomes an integral part of the procedure by which decisions are made. The Task Force has developed the following five mechanisms as measures by which to integrate information about all components of teaching ability, including instruction and interaction, into Stanford's faculty evaluation and reward system. By requiring consideration of this information before a decision can be made on faculty appointment, tenure, or promotion, we believe that the quality of decisions made will be improved. Our hope is that anticipated changes in outcomes will lead to changes in faculty perceptions of the system, attitudes, and activities as they relate to undergraduates, and that, as a result, they will engage in more student-faculty interaction.

Mechanisms for Implementation

1. Evidence of better-than-average effectiveness in teaching undergraduates should be an unconditional prerequisite for the granting of tenure.

The granting of tenure is the most crucial decision the University makes in any professor's professional life as it is virtually a lifetime guarantee of employment. Thus the criteria upon which that decision is made become major determinants of a professor's attitudes and activities. While teaching ability is officially proclaimed to be an important consideration in the tenure decision process, Task Force interviews and studies conducted by others show that professors at Stanford overwhelmingly perceive research accomplishment to be the overriding factor in such decisions. We believe that this widely shared perception explains, in part, why faculty hold the attitudes they do and offer undergraduates the subtle cues noted in Chapter II.

The Task Force proposes to alter this general perception (and the resultant attitudes and activities) by redressing the teaching-research imbalance in the tenure decision process that gives rise to it. We recommend that for professors who will be expected to instruct undergraduates, quantified evidence of better-than-average teaching ability, both in terms of instruction and interaction, be an unconditional prerequisite for the granting of tenure. Operationally, this means that any professor who did not score higher than the University-wide average on teaching ability, as calculated by comparing his numerical results on student evaluations with the overall University average, could not be awarded tenure. In the case of a prospective associate or full professor from other institutions, the student evaluations of his performance in the specially held lecture and seminar he conducted would constitute the basis for comparison. Again, if these evaluations fell below the University-wide average he could not be awarded tenure. Only a professor who would not be expected to do any undergraduate teaching would be exempt from this prerequisite.

It should be noted that we are proposing a necessary, but not sufficient, condition for the granting of tenure. The Task Force does not wish to replace evaluations of research with student evaluations of teaching. What we are proposing is that for tenure, a candidate must meet University research standards and have demonstrated that he is at least as good a teacher as half the present faculty. We feel this

minimum standard is a necessary step in order to protect future undergraduates not yet at Stanford from the clearly marginal teacher who might otherwise be granted tenure primarily on the basis of his research competence.

2. Effectiveness in teaching undergraduates should be an unconditional prerequisite for the promotion from associate to full professor.

Since 65 percent of Stanford's faculty already have been granted tenure,[4] and since the University is on record as not wishing to increase this percentage,[5] the requirement that those receiving tenure in the future have at least better than average teaching ability can have only limited impact. Presently, the promotion from associate to full is, more often than not, a routine advancement based on time at Stanford and demonstrated ability to conduct and publish research. The apparent lack of consideration of teaching ability at this step contributes, we believe, to the maintenance of the "other Stanford."

The Task Force recommends that demonstrated effectiveness at teaching undergraduates become an unconditional prerequisite for this advancement. The means for determining a given professor's level of effectiveness would be student evaluations. The minimum acceptable level of performance should be at least better than the Stanford average. As before, this would be a necessary, but not sufficient condition for advancement.

3. Students should comprise a significant portion of the voting members of departmental search and review committees.

Undergraduates are directly affected by the ability of faculty to teach, yet at present they have effectively little voice in faculty appointments, tenure, and promotion decisions. The Task Force believes that, in departments where it is presently not done, students, appointed by their departmental associations, should comprise a significant portion of the voting members of departmental search and review committees. We believe that their presence on these committees will help encourage the evaluation of teaching ability of candidates under consideration. In addition, we believe that by having students and faculty involved in debate over such decisions, interaction between them will increase. (See also Objective IV, mechanism two for a discussion of student responsibilities as members of search and review committees).

4. Junior professors whose main interests lie in undergraduate teaching should be allowed to substitute increased teaching loads for some research obligations.

A viable and cohesive university community requires that there be some professors whose primary interest lies in working with undergraduates just as it requires that there be other professors whose primary interests lie in conducting research. The present tenure review process does not adequately reward gifted teachers who wish to commit major portions of their time to teaching undergraduates. This bias has been demonstrated recently by several departments where popular and effective undergraduate teachers who had not produced extensive research were not awarded tenure. As noted before, the Task Force feels that when this institutional commitment to research becomes too great, it inhibits interaction. We feel that junior professors are the ones that feel this research pressure most acutely.

It is the Task Force's suggestion that those junior professors desiring to do so be allowed to substitute heavier undergraduate teaching loads for some research obligations. We further recommend that for such individuals, demonstrated teaching ability, as shown by student evaluations, be the predominant (but not sole) criterion upon which they are considered for tenure.

5. The Faculty Handbook should be modified to include a professional code of ethics for teachers.

One of the subtle ways in which present faculty tells incoming professors that their teaching ability will not be crucial to their success at Stanford is the absence of any statement in the *Faculty Handbook* about the responsibilities of professors toward the student. The Task Force recommends the inclusion of such a statement in the Handbook. This statement should be patterned after the AAUP 1966 "Statement on Professional Ethics," and should stress the importance of the professor as a teacher. We feel that as a professional body, the professoriate should make known its commitment to students, and should publish standards outlining the amount and quality of teaching expected of Stanford faculty members.

Sub-Objective 3

A REDISTRIBUTION OF THE UNDERGRADUATE TEACHING LOAD FOR SOME PROFESSORS

An organization communicates its priorities to participants through guidelines on the activities it expects them to perform, as well as through the information it gathers and the decisions it makes about them. The Task Force feels that Stanford expects less in the way of undergraduate teaching from two groups of professors than it should. We recommend that both be encouraged to assume greater undergraduate teaching loads, thereby increasing the amount of interaction they have with students.

Mechanisms for Implementation

1. Senior professors in the School of Humanities and Sciences and the School of Engineering should be encouraged to substitute one undergraduate seminar per year for one graduate course.

Senior professors seem a reasonable focal point for expansion of the University's undergraduate teaching resources. Since they often teach classes they have taught previously, the amount of time needed for preparation is frequently less than that needed by junior professors. More importantly, since the present University reward system places far more intense research pressure on junior professors than on their tenured colleagues, senior professors can afford to devote more time to undergraduate teaching. The Task Force recommends a shifting in the allocation of their teaching load. We believe that the dynamics of the present academic marketplace will allow such a shift. If, as has been predicted, the demand for Ph.D.'s continues to fall off then the graduate population at Stanford should decline somewhat, thereby freeing some faculty resources, currently devoted to graduate students, for greater involvement on the undergraduate level.

Senior professors interviewed by the Task Force indicated a desire for better relationships with undergraduates. Additional seminars could play an essential part in bridging the gap they perceive. Furthermore, the acclaimed success of the Freshman Seminar Program leads us to believe that these new seminars would be educationally beneficial for both undergraduates and senior faculty.

2. Visiting professors in all departments instructing undergraduates should be given course loads heavier than those of regular faculty members.

Visiting professors are presently required to teach the same number of courses as regular professors, most of them being graduate seminars. They have, however, almost no administrative and committee work, few advising obligations, and little dissertation work with graduate students. Therefore, the Task Force feels it would not be inequitable to require visiting professors to teach one un-

dergraduate seminar in addition to their normal load, or to teach one extra lecture course, thereby freeing a regular faculty member to teach an additional undergraduate seminar. By taking on an extra course, the total workload of visiting and regular faculty would be more nearly equal, and the number of seminars open to undergraduates would be greater.

In making this recommendation we do not wish to discourage visiting professors from coming to Stanford, but from an undergraduate perspective we see little value in committing scarce University resources to individuals who, at best, have minimal contact with undergraduates.

Objective III

A REDIRECTION OF THE EFFORTS OF THE OFFICE OF THE DEAN OF UNDERGRADUATE STUDIES SO AS TO INCREASE ITS EFFECTIVENESS AS AN ADVOCATE FOR UNDERGRADUATE EDUCATION

The results of the efforts of the Office of the Dean of Undergraduate Studies (ODUS) as an advocate of undergraduate education, to date, have been disappointing. Particularly troubling has been its failure to secure implementation of some of the major recommendations of SES that dealt with undergraduate education. The Task Force believes that the ineffectiveness of this office has stemmed, in part, from the misdirection of its energies into peripheral academic services and its somewhat ambiguous position in the organization. We recommend that the Office redirect its energies and three hundred thousand dollar budget toward more productive endeavors as outlined below, and thereby return to the functions first envisioned for it by SES — an effective advocate for, and innovator of, undergraduate education.

Mechanisms for Implementation

1. The Office of the Dean of Undergraduate Studies should press for the full implementation of four crucial SES recommendations:

a) encouragement of departments to offer more independent study, tutorials, honors work, and joint research

These activities are situations within which our data suggest student-faculty interaction flourishes. The Task Force recommends that the Office of the Dean of Undergraduate Studies vigorously encourage all undergraduate departments to further develop and expand such activities. We also believe that the Office should encourage the removal of present impediments to these programs, such as in the History department where independent study work is not counted toward the units an undergraduate needs to complete a History major. We feel that achieving an expansion of these programs should be one of the Office's top priorities.

b) creation of a general education college

Despite both the apparent success of the overseas campuses in encouraging close student-faculty interaction and the drafting of several proposals by faculty members to create such a college, little action has been taken by the Office of the Dean of Undergraduate Studies on this over-four-year-old SES recommendation. The Task Force feels that the intense joint study, the small classes, the living together of faculty and students, and the common social activities found in this

"Stanford in Stanford" would naturally lead to the student-faculty interaction we advocate, and might serve as a catalyst for such activities at Stanford overall. We recommend that the Office renew lagging efforts for the creation of such a college.

c) establishment of a Teaching Resources Center

The Task Force is aware that the Office of the Dean of Undergraduate Studies has advanced several proposals for such a center. We applaud these efforts, but are concerned that the proposed Center will concentrate chiefly on improving instruction, with which over 60 percent of the present Stanford undergraduates are satisfied. We recommend that the Center be designed, instead, to inform faculty and prospective teaching assistants about effective interaction techniques and about how human beings learn, as well as provide them with techniques for improving instruction. We support the intention to cooperate closely with the Graduate School of Education and its Center for Research and Development in Teaching in operating such a Center. We feel the liaison will be a productive one since the R and D Center in particular already has much of the necessary equipment, personnel, and expertise to set up such an activity.

We do not support the decision to seek outside funding, however, as we regard University support for the Center as crucial both for its acceptance and as an indicator of Stanford's commitment to quality undergraduate education. We recommend that the Provost's office once again consider funding the Center, and suggest that an amount of up to one percent of the current three hundred million dollar Campaign for Stanford would be an appropriate commitment as a permanent endowment for this Center.

d) encouragement of student evaluation of teaching

The Task Force already has recommended regular and mandatory student and collegial evaluation of teaching. We recommend that the Office of the Dean of Undergraduate Studies become the University unit in charge of analyzing evaluation data, distributing it, and ensuring that it becomes an integral part of appointment, tenure, and promotion decisions.

2. In its advocacy role, the Office of the Dean of Undergraduate Studies should concentrate on becoming involved in departmental decision making.

The department is a critical decision-making unit. Unfortunately, the working relationship between the departments and the Office of the Dean of Undergraduate Studies has not been close. An example of the clear need of the Office to become more involved at the departmental level is the case of granting tenure. Currently, the Dean of Undergraduate Studies is involved in the tenure review process at the Provostial level where there is substantial organizational momentum to ratify earlier-made departmental decisions. Rarely are negative departmental decisions about assistant professors reviewed at this level, yet these are the very decisions that, in terms of changing the evaluation and reward system that sustains the "other Stanford," need to be scrutinized most closely. We recommend that the Office of the Dean of Undergraduate Studies reorient its focus to have input at the departmental level where the potential for having impact is greater than higher in the administrative hierarchy.

3. Though the Office of the Dean of Undergraduate Studies should remain independent from the Office of the Dean of Humanities and Sciences, these offices should work more closely together than at present on the problems that face undergraduate education.

The Task Force's criticisms of the performance of ODUS must be tempered by the observation that the Office, by cutting across various departments and schools, is in an organizationally ambiguous position. This situation makes it extremely important that it maintain close contact with other administrative offices involved with undergraduate education. We feel this to be particularly important in the case of the Office of the Dean of Humanities and Sciences since most undergraduates take the majority of their classes in this school. Our interview with administrators and faculty members suggest that the present level of cooperation between these two offices is not high. We recommend that considerable effort be made to improve the working relationship.

Though disappointed in its performance to date, the Task Force nevertheless feels that the Office of the Dean of Undergraduate Studies should remain an independent office and not be incorporated within the Office of the Dean of Humanities and Sciences. We recommend the continuation of its autonomy for several reasons. First, we feel the ability of the Dean to work effectively with all schools would be impaired by too close an identification with any one school. Second, its independent budget allows it to remain relatively immune from intra-school politics. Third, its independence from other administrative units serves as an indicator of Stanford's continuing commitment to improving the education all undergraduates receive, regardless of the school to which they are attached.

Objective IV

A GREATER AWARENESS BY UNDERGRADUATES OF THE BENEFITS OF INTERACTION WITH FACULTY MEMBERS, AND OF THE NECESSITY TO PARTICIPATE IN THE INITIATION OF IT.

Previously in this report, we have criticized undergraduates for their general passivity and frequent failure to initiate interaction with professors. The Task Force believes that faculty are not solely responsible for the low level of student-faculty interaction, and concurs with the SES philosophy that each student must play an active role in his or her education. Both the random comments on our survey questionnaire and interviews with numerous faculty have convinced us that undergraduates must play a major role in overcoming the "other Stanford." To this end, we offer the following recommendations to our fellow students.

Mechanisms for Implementation

1. Undergraduates should take more advantage of tutorials, independent study, directed reading, directed research, and office hours.

The data presented in Chapter I shows that there is a significant correlation between these activities and desirable outcomes of the educational process. Though we recognize the rhetorical nature of this recommendation, the Task Force believes that currently available mechanisms for student-faculty interaction can be better utilized. A number of professors stated that few students visited them during posted office hours. In addition, students often tend to take the "easy" route of enrolling only in already structured lecture courses rather than designing a course of their own in consultation with a faculty member. We believe that students should be more active in seeking out faculty through tutorials, independent study, directed reading, directed research, and office hours.

We must point out, however, that such mechanisms for student-faculty interaction must not be used frivolously. Students who use considerable faculty time must be serious about the project or questions at hand or they do an injustice to their fellow students as well as to the faculty member by occupying time that could be better used. Before seeing faculty, students should carefully think through what they wish to discuss. We hope, however, that the students who read our report will seek out more interaction with faculty through the above mechanisms in a disciplined way and thus better use the currently available channels to further their own educations.

2. Students, through their undergraduate associations, should play an active role in departmental decision making.

Undergraduate associations should play a major role in departmental decision making in order to insure student input at the most basic organizational level in the University. Undergraduates, elected by their associations, or, if unfeasible, appointed by an elected executive committee of their associations, should serve as full members of search, promotion, tenure, and curriculum committees. Student members of these committees would report to and seek advice from their constituency in general meetings of the association. (See also Objective I, mechanism one for a discussion of the role of these associations in organizing departmental symposia).

We wish to add one other note about this type of student involvement. Deliberations about faculty appointment, tenure, and promotion are serious, confidential matters and students must accept the responsibility for showing the same amount of discretion in such matters as do faculty participants. We believe

two procedures ought to be adopted in order to emphasize this point for students. First, we believe that all students serving on such committees should be reminded in writing, by the student association which appointed them, of their responsibilities for maintaining the confidentiality of proceedings. Second, if at any time there is sufficient evidence to indicate that confidentiality has been violated by a student member of any departmental decision-making body, the chairman of the committee on which the student is serving should address a letter of complaint to the departmental student association requesting that the student be barred from any further involvement in departmental decision making.

3. Students should attempt to put their educational goals, however vague, into writing before seeing their advisor.

The purpose of such written statements would be to facilitate thought on the part of each student about his own education so that courses and activities can be intelligently chosen. Such statements would also be of use to advisors in understanding the intellectual and emotional needs of their advisees. The statement could be as long or short as the student desires, and would be subject to revision as the student advances. We do not see this recommendation as a new requirement, but simply as a mechanism for alleviating problems that chapter I demonstrated exist in the advising system. In addition, those students who wish to spend more time exploring their own educational goals could take courses under their advisor, as outlined under Objective I, mechanism three.

4. The ASSU should continue to support, and if possible expand, a student-run course review.

A frank and candid course review can be of considerable value in helping students select their classes. By better matching students with classes, the Task Force hopes that student-faculty interaction will increase. In addition, the faculty can get a better perception of how students reacted to a course by it being evaluated each time it is offered.

We understand, however, that in order to be successful, the ASSU must draw on vast numbers of student volunteers in order to publish a comprehensive course review. Given adequate funding, the ability of the ASSU to publish a thorough, systematic, and high-quality course review on a continuing basis ultimately rests on the willingness of the student body to give the project more than moral support by volunteering to work without pay for the project and by carefully filling out the ASSU evaluation forms when they are distributed in their classes.

TWO FINAL RECOMMENDATIONS

In conclusion, the Task Force believes that this report has raised issues that deserve a complete and open hearing before the University community. As a final recommendation, we urge the University to convene an ad hoc commission consisting of faculty and undergraduate students to consider the questions raised in this report and its recommendations. After more than five years of, at best, only minimal improvement, we believe that the whole issue of the quality of the undergraduate experience at Stanford needs to be thoroughly reexamined.

We also recommend to readers from other universities that appropriate means be devised to assess the quality of student-faculty interaction within their own institutions. We believe that only when more attention is paid to this question will the quality of undergraduate teaching and learning be improved and will Aristotle's vision of the teacher as "midwife to the thought," rather than simply a bearer of information, become a reality.

FOOTNOTES

Chapter I — The Two Stanfords

1. *Stanford University Financial Report,* 1971 (Stanford, 1971), p. 22.
2. Allan M. Cartter, "An Assessment of Quality in Graduate Education" (Washington; American Council on Education, 1966).
3. *Stanford University Financial Report,* 1971, p. 22
4. James Cass and Max Birnbaum *Comparative Guide to American Colleges* (New York: Harper and Row, 1969), p. 680
5. Ibid, p. 681
6. *Stanford University Financial Report,* 1971 p. 22.
7. Stanford *Daily,* January 14, 1965, p. 4
8. The Carnegie Commission on Higher Education, *Reform on Campus* (New York; McGraw-Hill Co., 1972) pp. 16-17.
9. John Black, "Survey of the Class of 1971" (Stanford: Mimeo, 1971)
10. Lynn Wood and Robert C. Wilson, "Teachers With Impact," *The Research Reporter* (Berkeley: The Center for Research and Development in Higher Education, 1971), pp. 1-4

Chapter II — Why the "Other Stanford?"

1. See: Kenneth A. Feldman and Theodore M. Newcomb, *The Impact of College on Students* (San Francisco: Jossey-Bass, Inc., Publishers, 1970).
2. Ibid.
3. See for example: Bradley Efron, "Study of the Stanford Faculty" (Stanford: Mimeo, 1971); Robert R. Hind, *Evaluation and Authority in a University Faculty* (Stanford: unpublished Ph.D. dissertation, 1968); *The Study of Education at Stanford* (SES), Volume VIII: Teaching, Research and the Faculty (Stanford: Stanford University Press, 1968).
4. SES, Volume VII, pp. 128-9; and, Efron, p. 119
5. Efron, p. 57
6. Ibid., p. 34
7. Robert P Hind, Stanford M. Dornbusch, and W. Richard Scott, *The Evaluation of University Teachers: An Application of a Theory of Evaluation and Authority* (Stanford: Stanford Center for Research and Development in Teaching. Technical Report No. 32 (1972), p. 6
8. The list of authors is long and impressive and unnecessary for the discussion here. See, however, the findings of Hind, Efron, SES, et al., already cited.
9. Interview with W.H. Cowley, David Jacks Professor Emeritus of Higher Education, Stanford University, Palo Alto, California, March, 1973.
10. Efron, pp. 35, 119; HInd, pp. 116-117.
11. SES, Volume VIII, p. 131
12. Efron, p. 34
13. Task Force interviews, January 1973.
14. Ibid.
15. *The Study of Education at Stanford* (SES), Volume I: The Study and Its Purposes (Stanford: Stanford Press, 1968), p. 8.
16. Ibid., p. 10
17. Dwight R. Ladd *Change in Educational Policy* (New York: McGraw-Hill

Book Company, 1970), pp. 133, 140.

18. Ibid., p. 133.

19. *The Study of Education at Stanford (SES)*, Volume X: Government of the University (Stanford: Stanford Press, 1968) p. 45.

20. Ibid., p. 44.

21. Ibid., p. 45

22. *The Study of Education at Stanford* (SES), Volume II: Undergraduate Education (Stanford: Stanford Press, 1968), p. 31.

23. Ibid., p. 25

24. Task Force interviews, January-April 1973.

Chapter III — Changing the "Other Stanford"

1. For just one of many recent discussions of this topic see Milton Hildebrand "The Character and Skills of the Effective Professor," *Journal of Higher Education*, ILIV, Number 1 (January, 1973), pp. 41-50.

2. See Wood and Wilson cited above.

3. Interestingly, at least 45 percent of the faculty seem to support this point of view, though only 15 percent have ever had a colleague evaluate their teaching. See Efron, p. 23.

4. David S.P. Hopkins, *The Influence of Appointment, Promotion, and Retirement Policies on Faculty Rank Distributions*, Stanford University Academic Planning Office, Report 72-2 (July, 1972), p. 2.

5. Stanford University, *Faculty Handbook* 1972-73, p. 28.

APPENDICES

APPENDIX A

Sampling Methodology

A sample of 1600 students was drawn from the universe of undergraduates enrolled at Stanford during the Winter (1973) term. A list of names and addresses was compiled by taking every fourth name listed in the Stanford *Student Directory*. If an address was not listed for the person, his or her name was discarded and the one immediately above on the list was taken instead. Questionnaires were mailed through the U.S. Post Office bulk rate mailing system so that all recipients of the survey received it at approximately the same time. A self-addressed, stamped envelope was enclosed for ease of return. All returns were received within ten days. A total of 916 questionnaires were returned, resulting in a response rate of 57.3 percent.

Sample Description

The sample drawn was composed of 565 (61.7 percent) men and 345 (37.7 percent) women, reflecting past 60 / 40 men to women admissions policies. Freshmen were somewhat overrepresented, comprising 33.2 percent of the sample, while Sophomores were somewhat underrepresented, comprising only 18.3 percent of the total sample. Of those students responding, the largest major disciplinary representation came from the social sciences (31.2 percent). The relative frequency for other areas was as follows: Humanities, 21.8 percent; Sciences, 26.6 percent; VTS — Human Biology, 6.9 percent, and Engineering, 7.8 percent. Eighty-seven percent of the sample had not been abroad to one of the Stanford campuses while 13 percent had. Seventeen point six percent of those responding indicated they were transfer students.

Data Analysis

The data from the precoded questionnaire were punched into machine-readable cards and processed by using the Statistical Package for the Social Sciences (SPSS) programs available at the Stanford Computation Center. Several different program capabilities of the SPSS system were utilized during the data analysis phase. The CODE BOOK sub-program was utilized to obtain frequency distributions and histograms for each variable in the questionnaire. The FASTABS sub-program was used to obtain cross-tabulations of all dependent variables with the primary independent variables, and later when third and fourth variables were being held constant over some basic relationship.

Questionnaire

The questionnaire used (see Appendix B) was constructed by members of the Task Force and is based, in part, on several other questionnaires used in other contexts. In sections II through V, for instance, we have borrowed freely from existing instruments such as the College and University Environment Scales (CUES) and the College Characteristics Index (CCI) those items dealing specifically with faculty-student interaction. (See Stern, *People in Context,* 1967) The questions dealing with student satisfaction in part VI are the same ones used by the Carnegie Commission on Higher Education in its recent publication, *Reform on Campus,* (1972). The four paragraphs in part VIII, based on the Clark-Trow typology of student sub-cultures, are modifications of an earlier successful attempt at operationalizing the typology by Gottlieb and others, as reported in W.B. Brookover (1965). Although the work of other researchers was relied on heavily, a number of questions are our own, and the structure of the questionnaire itself evolved out of several Task Force discussions about perceived problems in faculty-student interaction at Stanford.

APPENDIX B

STANFORD UNIVERSITY
STUDENT TASK FORCE ON UNDERGRADUATE EDUCATION
SURVEY OF UNDERGRADUATE ATTITUDES AND ACTIVITIES

Dear Fellow Student:

This questionnaire is part of a major study of undergraduate education being conducted by the Student Task Force on Undergraduate Education at Stanford. The Task Force is under the sponsorship of the Stanford Workshops on Political and Social Issues (SWOPSI) and is staffed entirely by students. As far as we can determine, the type of information requested in this questionnaire has not been gathered at Stanford in the past.

We know you are busy! Consequently, we have tried to make the questionnaire as simple, direct, and quick to complete as possible. Due to the sampling technique being used, however, (one which is less expensive and less cumbersome than a survey of the whole student body but still extremely accurate) it is very important that each student who receives this questionnaire be sure to return it. Please use the enclosed pre-addressed, postage-paid envelope and simply drop it in any mailbox. Promptness in responding is another very important factor in this study, so please try to complete and return the questionnaire today.

Thank you for taking time to assist us in this project. For each question, please mark the category of response that most nearly corresponds to your situation or general attitude.

Sincerely,
Members of the Task Force

I. BACKGROUND INFORMATION

A. CLASS: (10)
1) Freshman
2) Sophomore
3) Junior
4) Senior

B. SEX (11)
1) Male
2) Female

C. MAJOR DISCIPLINE: (12)
1) Humanities
2) Sciences
3) Social Sciences
4) VTS / Human Bio
5) Engineering

D. HAVE YOU EVER STUDIED AT ONE OF THE "STANFORD ABROAD" CAMPUSES? (13)
1) No
2) Yes

E. ARE YOU A TRANSFER STUDENT? (14)
1) No
2) Yes

F. PLEASE INDICATE THE NUMBER OF SEMINARS OF FIFTEEN (15) STUDENTS OR FEWER YOU HAVE PARTICIPATED IN AT STANFORD (HOME CAMPUS ONLY): (15)
0) None
1) One
2) Two
3) Three
4) Four
5) Five
6) Six
7) Seven
8) Eight or more

II. FACULTY-STUDENT INTERACTION:

Please indicate the extent to which you agree or disagree with each of the following statements. Please respond only on the basis of your experiences at the Stanford home campus.

	STRONGLY AGREE 1	AGREE WITH RESERVATIONS 2	DISAGREE WITH RESERVATIONS 3	STRONGLY DISAGREE 4	
Faculty members will see students only during scheduled office hours or by appointment	( )	( )	( )	( )	(16)
The professors really talk with students here, not just at them	( )	( )	( )	( )	(17)
The professors seem to have little time for conversation with students	( )	( )	( )	( )	(18)
Students almost never see the faculty except in class	( )	( )	( )	( )	(19)
I often feel more inhibited than stimulated by the faculty to do my best work	( )	( )	( )	( )	(20)
Faculty often try to get to know me as a person	( )	( )	( )	( )	(21)
Many faculty members expect students to show deference toward them	( )	( )	( )	( )	(22)
My present level of communication with the faculty is about right	( )	( )	( )	( )	(23)
I don't feel like I know any faculty members as people	( )	( )	( )	( )	(24)

III. TEACHING

Please indicate the extent to which you agree or disagree with the following statements: (NOTE: T.A.'s are not to be considered as "faculty").

Professors clearly explain the goals and purposes of their courses	( )	( )	( )	( )	(25)
Most professors care very little about the quality of their teaching	( )	( )	( )	( )	(26)
It is hard to prepare for examinations because students seldom know that will be expected of them	( )	( )	( )	( )	(27)
Professors often try to provoke arguments in class, the livelier the better	( )	( )	( )	( )	(28)
Students can feel free to disagree openly with professors	( )	( )	( )	( )	(29)

The feedback I have received in the past from professors for work done has been adequate	( )	( )	( )	( )	(30)
Most classroom activity is enjoyable	( )	( )	( )	( )	(31)
Although good teaching is important, a professor's reputation in his discipline should be the primary basis for promotions and tenure	( )	( )	( )	( )	(32)

IV. ADVISING

Please indicate the extent to which you agree or disagree with the following statements:

Counseling services offered by faculty members are really personal, patient, and extensive	( )	( )	( )	( )	(33)
Faculty advisers often go out of their way to help you	( )	( )	( )	( )	(34)
Most advisers aren't interested in working out a program with the student. They much prefer that a student work out his or her own program so they merely have to check it over	( )	( )	( )	( )	(35)
I get better advice about my program from peers than from my faculty adviser	( )	( )	( )	( )	(36)
Personal conversations sometimes develop during sessions with my faculty adviser	( )	( )	( )	( )	(37)
Most of the faculty are not interested in a student's problems, academic or otherwise	( )	( )	( )	( )	(38)
My relationship with my faculty adviser has been more informal and relaxed than that with other faculty members	( )	( )	( )	( )	(39)
It is often quite difficult to get in touch with my faculty adviser to arrange a conference	( )	( )	( )	( )	(40)

V. ACTIVITIES

A. The following statements are about some of your possible activities at Stanford last quarter. Please indicate below the number of times during the Fall quarter just ended you did any of the following:

	NEVER	ONCE OR TWICE	THREE OR FOUR TIMES	FIVE OR SIX TIMES	MORE THAN SIX TIMES	
	1	2	3	4	5	
Talked with a professor about your career plans	( )	( )	( )	( )	( )	(41)

Went to a professor's home for a class session	( )	( )	( )	( )	( )	(42)
Talked with a professor about life in general	( )	( )	( )	( )	( )	(43)
Had lunch or supper with a faculty member	( )	( )	( )	( )	( )	(44)
Was at a social function where a faculty member was present	( )	( )	( )	( )	( )	(45)
Participated in an informal bull session where a faculty member was present	( )	( )	( )	( )	( )	(46)
Met with faculty adviser	( )	( )	( )	( )	( )	(47)
Hesitated to visit an instructor because his manner was aloof or threatening	( )	( )	( )	( )	( )	(48)

B. In addition to the above activities have you ever while at Stanford:

	NO 1	YES 2	
Sought advice from a faculty member on a personal matter?	( )	( )	(49)
Known faculty members on a first-name basis?	( )	( )	(50)
Engaged in independent study which involved a one-to-one relationship with a professor?	( )	( )	(51)
Felt personally close to some faculty members?	( )	( )	(52)
Worked with a faculty member on research he or she was doing?	**( )**	**( )**	**(53)**
Been challenged by a faculty member on a one-to-onw basis to really think?	**( )**	**( )**	**(54)**
Had a faculty member extensively criticize a paper or project you did (i.e. obviously spend a lot of time checking your work?)	**( )**	**( )**	**(55)**

C. In your Stanford experience, how many professors:

	NONE 1	ONE 2	TWO 3	THREE TO FIVE 4	MORE THAN FIVE 5	
Have had a truly significant impact on your intellectual development?	**( )**	**( )**		**( )**	**( )**	**(56)**
Have used audio-visual aids, simulation games, or other special teaching techniques in class?	**( )**	**( )**	**( )**	**( )**	**( )**	**(57)**
Have relied largely on T.A.'s to grade their papers?	**( )**	**( )**	**( )**	**( )**	**( )**	**(58)**
Have tried to stimulate your thinking about ideas going beyond the subject matter of the course?	**( )**	**( )**	**( )**	**( )**	**( )**	**(59)**
Have seemed to be interested in you as a person?	**( )**	**( )**	**( )**	**( )**	**( )**	**(60)**

VI. OVERALL SATISFACTION

	VERY SATISFIED	SATISFIED	ON THE FENCE	DISSATISFIED	VERY DISSATISFIED	
	1	2	3	4	5	
How satisfied with the following are you?						
The intellectual environment	( )	( )	( )	( )	( )	(61)
Faculty - student relations	( )	( )	( )	( )	( )	(62)
Quality of classroom instruction	( )	( )	( )	( )	( )	(63)
Student - student relations	( )	( )	( )	( )	( )	(64)
The advising system	( )	( )	( )	( )	( )	(65)
How satisfied overall are you with your Stanford education?	( )	( )	( )	( )	( )	(66)

VII.

Please read all four of the following statements first. Then go back and mark the description that seems most appropriate to you as an individual. None of the statements will be totally suitable to you probably, but please select the one that seems to describe you best. (67)

1) I am interested in intellectual pursuits but primarily for the purpose of preparing for my future career. I am not interested in either the purely social or the purely intellectual phases of campus life, but I might participate in these activities on a limited basis so long as they were reasonably balanced with my school work. For the most part, my primary reason for being here is to get high-quality occupationally-oriented training.

2) I am interested in learning, but mostly in the way I choose. I am very interested in the world of ideas and books and try often to attend outside lectures, concerts, films, and the like. I often do extra reading beyond course requirements. In general, I tend to reject fraternities and sororities in favor of more academic campus organizations — or none at all. My primary motivation in my work is intellectual curiosity.

3) I am a lot like the kind of person described above but I also enjoy being involved in social and political activities associated with the campus outside of the academic structure. I usually try to keep my grade-point up as high as possible because I feel that academics come first, but I also feel that the social side of Stanford life is certainly significant in my overall development.

4) I am interested generally in intellectual pursuits, but I get my greatest satisfaction from the non-academic side of campus life such as social activities, athletic events, etc. I feel that getting good grades is important but that the other side of college — the social side — is very important to me. I study hard but hardly ever do any extra or unassigned reading outside of class.

	NO	YES	
	1	2	
Are you a member of a racial minority?	( )	( )	(68)